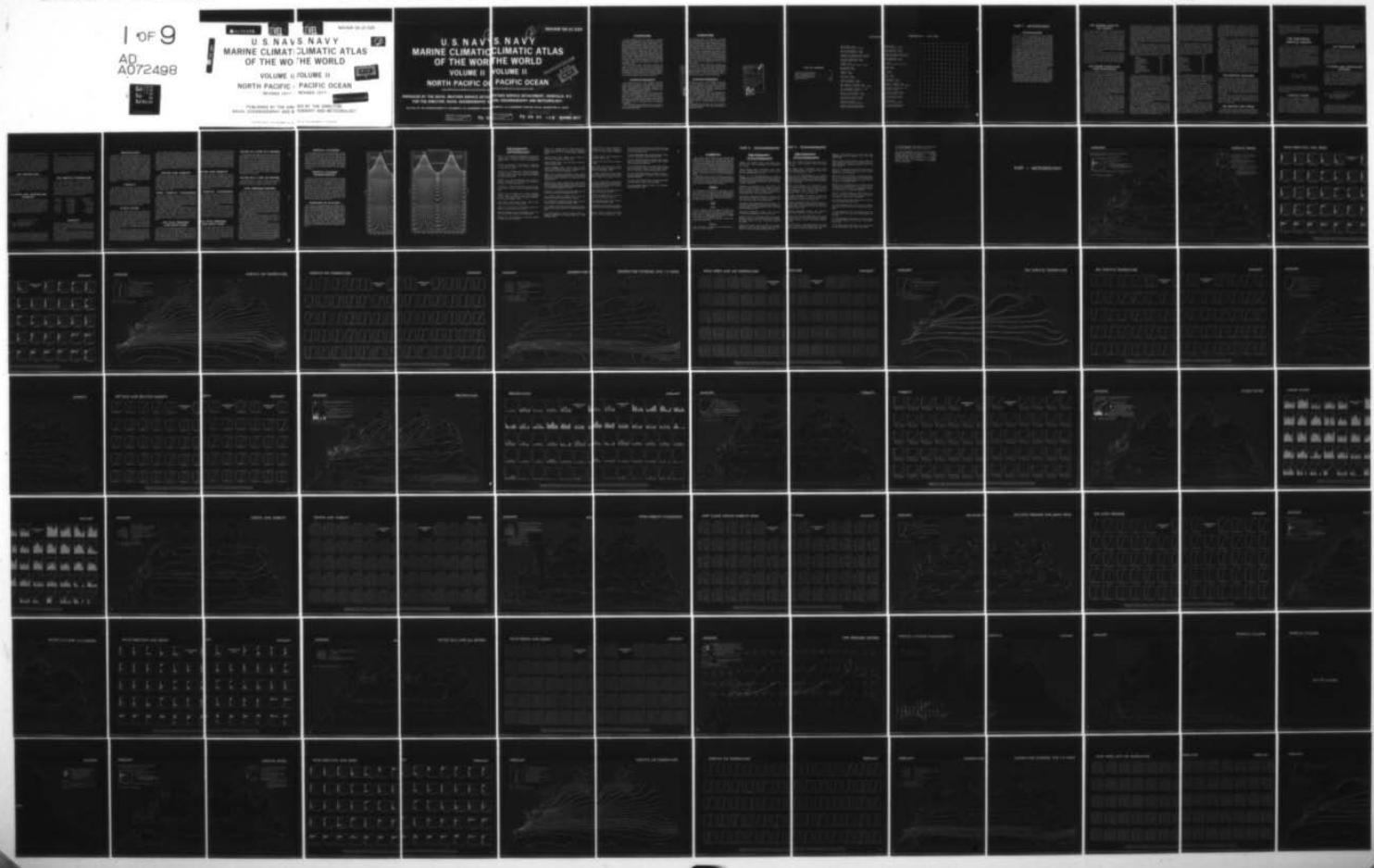
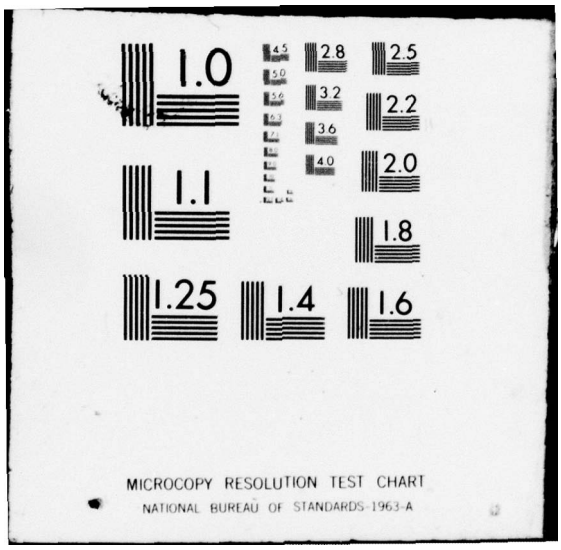
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FOREWORD

A joint feasibility study for producing a combined climatological/oceanographic atlas of the water areas of the world was undertaken by the Naval Weather Service Command and Naval Oceanographic Office in 1969. The results of this feasibility study showed a significant increase in surface marine observations since the publication of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. The additional data plus recommendations for revised content and format, provided by various Naval Weather Service fleet units and field activities, warranted the updating of the entire series of marine climatic charts of the world. The data base for this revision of Volume II of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD contains three times the amount of data that was available when Volume II was published in 1956.

The Naval Weather Service Detachment, Asheville, was tasked to produce a technical model of the atlas providing a sample of each type of page presentation proposed with supporting documentation. The atlas mock-up was approved by Headquarters, Naval Weather Service Command in 1971 as the model for Volume I (1974) and Volume III (1976) as well as for this atlas and future volumes of this series.

ACKNOWLEDGMENT

The revision of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD series is managed by the Naval Weather Service Detachment, Asheville, for the Director, Naval Oceanography and Meteorology (formerly Commander, Naval Weather Service Command). This volume was prepared at the National Climatic Center.

Specific acknowledgment is made to the following members of the National Climatic Center; Project Leaders R. G. Quayle and D. C. Fulbright; Messrs. J. D. Elms, A. W. Y. Chen and G. W. Goodge for their assistance in the editorial evaluation and analyses of the data; Messrs. R. H. Courtney, R. G. Baldwin, Mrs. D. T. Hawkins and Ms. D. H. Goodman for drafting.

The oceanographic part was based upon data provided by the U.S. Naval Oceanographic Office, whose contribution is acknowledged with thanks.

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PART I - METEOROLOGY

INTRODUCTION

The eight volume series of the U.S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD has had wide acceptance as an authoritative reference for large scale operational planning and applied research. This volume, based on a little over 120 years of data (1854-1974), is an update of Volume II (U.S. Navy *Marine Climatic Atlas of the World*, 1956) and is designed to fulfill the same requirements. This volume is not, however, a one for one revision. Some of the data presentations have been changed and wave statistics have been added. No upper air charts are presented since in recent years several comprehensive volumes of upper air data have been published separately (*Upper Wind Statistics Charts of the Northern Hemisphere*, Volumes I and II, NAVAER 50-1C-535, 1959; *Components of the 1000 MB Winds of the Northern Hemisphere*, NAVAIR 50-1C-51, 1966; *Selected Level Heights, Temperatures and Dew Points for the Northern Hemisphere, including Monthly Mean Wind Speed and Direction*, NAVAIR 50-1C-52, 1970; *Selected Meridional Cross Sections of Heights, Temperatures and Dew Points of the Northern Hemisphere*, NAVAIR 50-1C-59, 1971).

The descriptive explanations which follow give details concerning the quality control and processing of the observations and the development of the charts and graphs. Limitations imposed by the quality of the data and the methods adapted to help overcome them are also discussed.

This Atlas is the result of a concerted and extensive effort by many people (aided by automatic data processing equipment) to present a detailed and useful ocean climatology.

THE GENERAL PLAN OF THE CHARTS

The "point statistics" common to land climatology are made possible by the maintenance of weather records at fixed locations for long periods. Such statistics are not generally available for Ocean Basins. However, in the past three decades the Ocean Weather Station (OWS) networks maintained through the cooperation of several maritime nations have been a real step toward fixed point locations. Unfortunately, many of these stations have been phased out.

Beyond the coverage afforded by the five Ocean Weather Stations in the North Pacific of which only two operate full time, vast areas remain for which transient ships' logs of surface weather observations are the only source of detailed knowledge of ocean climate.

It is possible to select areas small enough to permit an approximation to the "point statistics" of land stations where the number of observations is sufficient. For this atlas 45 representative areas were selected. These are outlined on the base chart and numbered. Graphs and Tables for these areas have been placed on the facing page for easy reference to the base chart.

THE OBSERVATIONS AND THEIR PROCESSING

Variations in definitions, codes and units of measurements used by maritime nations for recording and punching marine observations have resulted in 18 different forms (or "decks") of punched cards available for use at the National Climatic Center. These data have been converted to a common format and placed on magnetic tape. For a more detailed explanation of the conversion procedures, the reader is referred to the Tape Data Family-11 (TDF-11) Reference Manual (National Climatic Center, 1968). This tape deck was the primary data source for this volume. Funding for the development of TDF-11 was provided primarily by the Naval Weather Service Command with supplemental support from the Environmental Science Services Administration (now NOAA) and the Department of Defense.

The data were subjected to complex quality control procedures before processing. First, duplicate observations (which entered the data base from different sources) were eliminated. The remaining observations were then checked for internal consistency. Elements failing to meet the internal consistency checks were either adjusted or eliminated. The data were subjected to an extreme value check. These quality controlled data have been retained in a separate tape file designated as the U.S. Navy Marine Atlas Work Tapes.

Regardless of the amount of quality control to which marine observations are subjected there are many inherent problems which can be corrected in only a general way. Among these are: the difficulty in taking observations of meteorological elements from an unstable platform, different levels of observer experience, recording errors, variations in observing and coding practices, punching errors, the scarcity of observations over vast areas, and the effect of weather elements themselves on measurements. Ships may avoid bad weather when possible (Quayle, 1974), thus decreasing the amount of bad-weather data; or they may slow down in foul weather, thus taking more observations and increasing the data sample.

Complete observations (including all elements) from transient ships are steadily becoming more common. Ships' weather logs of past decades, incomplete by today's standards, show wind direction and speed to be the elements almost invariably recorded. From a survey of the data available for this atlas, the percentage of observations containing other basic weather elements is as follows:

Element	*Percent*
Air Temperature	99
Sea Temperature	92
Total Cloud Amount	92
Visibility	93
Sea Level Pressure	88
Present Weather	88
Low Cloud Amount	64
Wet Bulb Temperature	62
Waves	50

Because of incompatible observing or coding procedures, many observations of total cloud amount, visibility, present weather, low cloud amount, and wave data have been eliminated from the computations. This significantly reduced the percentages of these elements in the above table.

Some peculiarities of selected elements are listed below:

PRECIPITATION — Of all of the elements recorded in historical marine observations, precipitation is one of those most subject to error in interpretation. This derives from a number of causes such as coding practices, observers' preference for certain present weather codes and other biases.

SEA SURFACE TEMPERATURE — This element is recorded with a fairly high frequency in marine observations. The various methods of recording, however, tend to decrease the reliability of the individual values. Gradients and relative values are considered to be reliable.

SEA LEVEL PRESSURE — This element is one of the least accurate because of instrument, coding and conversion errors. To be capable of registering accurate pressure readings, barometers used on shipboard generally require more frequent calibration than they receive. Despite the inaccuracies of the individual readings, however, the large scale patterns and gradients are relatively accurate.

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AIR TEMPERATURE — This element is considered to be generally reliable. However, in the tropics, as the result of poor instrument exposure, observed temperatures on transient ships under sunny conditions appear consistently high. This data subset influences primarily the distribution of maximum temperatures (99th percentile) while the minimum (1st percentile) and mean temperatures are relatively unaffected.

VISIBILITY — It is difficult to measure visiblity at sea because of the lack of reference points. Also, some observers report reduced visibilities at night because of darkness. The coarseness of the coding intervals, however, tends to minimize serious biases in the summarized data.

WAVE DATA — Suitable quantitative wave records are available only since the late 1940s. This, coupled with an apparent reluctance on the part of many observers to take wave observations, particularly in the early years, leaves waves as the least often recorded element in marine observations. The estimate of wave heights is very subjective and depends upon the experience of the observer and the size of the ship from which the observation is taken. Wave heights reported by most transient ships tend to be low when compared to reference measurements. Adjustment for this apparent bias has not been made in this atlas.

Despite the lower confidence level in the individual values of these elements, through subjective analyses and reference to previous studies, the means, extremes and gradients presented by the isopleths are considered to be quite reliable.

THE ISOPLETH ANALYSES

The climatic data in this atlas are presented by isopleths (lines connecting points of equal magnitude) supplemented by graphs and tables. The isopleth analyses were completed cooperatively by a team of meteorologists. The basic charts were automatically plotted from one or two degree area summaries for the entire ocean basin. The Ocean Weather Station data in the North Pacific were not as beneficial as those in the North Atlantic. Nevertheless, these data were still invaluable in evaluating surrounding transient ship observations.

As a further aid to data interpretation, the analysts made use of the observation count which was plotted with all summarized data. Additionally, continuing reference was made to the marine atlases and supplemental publications listed in the bibliography.

THE GRAPHS AND TABLES

To supplement the isopleth analyses, graphs and tables are presented for each representative area. The graphs and tables, in most instances, represent the objective compilation of

available raw data for specified areas without regard to suspected biases or inconsistencies.

Since the final isopleth analyses reflect both objective and subjective considerations, differences may be found when comparing the graphical data for a representative area with the analyses.

THE INDIVIDUAL SURFACE CHARTS

The legend in each chart is designed to explain data content — tables, graphs and isopleths. Each legend contains detailed instructions on how to read the tables or graphs. The following paragraphs contain additional remarks likely to be of interest to those called upon to interpret the data and provide answers to specific operational questions.

Most of the graphs and tables allow approximation of the empirical probability of occurrence of selected criteria. This is a major factor in assessing the risk involved in operational planning. For certain elements, standard deviations are given on the graphs to provide a measure of relative variability. The standard deviation on these graphs is denoted by 's' and was computed using the expression:

$$s = \left[\frac{N\Sigma x_i^2 - (\Sigma x_i)^2}{N(N-1)} \right]^{1/2}$$

where N is the number of observations in the sample and x_i is the *ith* realization of the random variable X. The use of (N-1) in the denominator gives the best estimate of the population standard deviation.

SURFACE WINDS

Surface wind is the element most commonly observed and recorded. The wind distribution is presented by a combination of two graphic forms — the bar graph and the contingency table. The bar graph corresponds to the percent scale at the top of the square and gives reference to the wind direction frequency. The contingency table gives the percent frequency of each wind speed class within each direction. By adding the totals lines at the bottom of the graph it is possible to approximate the percent frequency of wind speed occurrence for selected criteria. For the example graph in the legend, 71% of all winds were < 17 knots.

Because of the continuous record at the Ocean Weather Stations, it is possible to compute duration statistics for gales. These graphs are printed over or immediately adjacent to the respective locations of the Ocean Weather Stations on the base chart. Legends are self explanatory and show durations of wind ≥ 34 knots as well as recurrence intervals. Due to the location of OWS N under the North Pacific subtropical high, gale force winds were not observed for June and July, therefore, no events appeared on the graph.

AIR TEMPERATURE

The threshold values of $\leq 0^\circ C$ and $\geq 20^\circ C$ for the isopleths of air temperature were selected in response to requests by a number of users who considered these as operationally significant for outside marine activity. The mean temperature for each wind direction and calm is shown by dots in the graph opposite each direction and corresponding to the temperature scale at the bottom. Note the temperature range and scale may vary from area to area and month to month.

T-H INDEX AND TEMPERATURE EXTREMES

The American Society of Heating and Ventilating, as early as 1923, introduced a term called "effective temperature" which is a measure of comfort based on temperature and humidity. This is the term we call THI (Temperature — Humidity Index). It has been empirically determined that a majority of people will be uncomfortable when the index reaches 24°C. THI is computed by the following equation, adapted from one described by E. C. Thom, 1957:

$$THI = 0.4\,(T_d + T_{wb}) + 4.7778$$

where: T_d = Dry Bulb Temperature (°C)
T_{wb} = Wet Bulb Temperature (°C)
THI is in degrees Celsius

Isopleths of the 1% and 99% levels of air temperature have been selected to present extreme temperature conditions. The graphs show air temperature versus wind speed. Use may be made of these charts to determine the extent of discomfort likely because of extreme heat or cold. They may

occurrence for selected criteria. For the example graph in the legend, 71% of all winds were < 17 knots.

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Isopleths of the 1% and 99% levels of air temperature have been selected to present extreme temperature conditions. The graphs show air temperature versus wind speed. Use may be made of these charts to determine the extent of discomfort likely because of extreme heat or cold. They may also be used to estimate the likelihood of superstructure icing.

Ice accretion is a complicated process that depends upon sea conditions, temperature, wind and the size and behavior of the ship. Superstructure icing can affect all ships but is more dangerous for smaller vessels. Icing potential exists when the air temperature falls below the freezing temperature of sea water (usually about -2°C) with the wind speed equal to or greater than 11 knots. The lower the temperature and higher the wind speed, the greater the icing potential. Ice accretion may become quite severe with temperatures $\leq -9^{\circ}C$ and wind ≥ 34 knots.

SEA SURFACE TEMPERATURE

Sea surface temperature is recorded with fairly high frequency in marine observations. The 1% and 99% isopleths give estimates of the extremes that may be encountered at any location. The graphs are simple cumulative percent frequency presentations. The temperature range and scale on the graphs may vary from area to area and month to month.

Sea surface temperature can be used to estimate the approximate time a person in ordinary clothes and life preserver may be expected to survive in the water:

Water Temperature	*Exhaustion or Unconsciousness*	*Expected Time of Survival*
$< 0^{\circ}C$	$<$ 15 min	$<$ 15 to 45 min
0 to 5°C	15 to 30 min	30 to 90 min
5 to 10°C	30 to 60 min	1 to 3 hrs
10 to 15°C	1 to 2 hrs	1 to 6 hrs
15 to 20°C	2 to 7 hrs	2 to 40 hrs
20 to 25°C	3 to 12 hrs	3 to indefinite hrs
$> 25^{\circ}C$	Indefinite	Indefinite

HUMIDITY

Moisture content of the atmosphere is an element which has been recorded relatively infrequently in marine observations. The 1% and 99% dew-point temperature isopleths give estimates of extremes of this element that may be encountered at any location.

The graph depicts wet bulb and relative humidity information. The cumulative percent frequency of wet-bulb temperatures may be read from the solid line with reference to values on the scale at the top of the graph. Relative humidity may be read from the dashed line with reference to the scale at the bottom of the graph.

PRECIPITATION

Precipitation charts and graphs are intended to depict the frequency of precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow, at the time of the observation. Based on work done in connection with Volume I (Revised) North Atlantic Ocean, present weather codes 20-27 (precipitation within the past hour) were counted in precipitation frequencies to correct an apparent observational bias. The graphs show precipitation by wind direction. The percent frequency of all observations which reported precipitation is printed in the upper right corner of each graph. The distribution of precipitation by wind direction (and calm) is given by the bar graph. This graph is based on precipitation frequency and not on wind direction frequency. The reader should refer to the surface wind chart if he is interested in the wind direction and speed distribution.

VISIBILITY

The cumulative percent frequency of horizontal visibility is presented by nautical mile class intervals rather than by kilometers. The percentage of horizontal visibility equal to or greater than 25 nautical miles can be obtained by subtracting from 100% the cumulative percent frequency at the point < 25 on each graph. Caution is advised, however, interpreting these areas since, because of curvature of the earth, it is virtually impossible to see 25 miles horizontally from the bridge of most ships. The supplemental table at the bottom of the graph gives percentage of visibilities < 2 nautical miles which occurred with each wind direction and calm.

CLOUD COVER

Even with the increased data base, the quality and quantity of low cloud data is quite poor. However, the total cloud amount element does not suffer from this deficiency to so great an extent. The number of observations available which contain only total cloud amount continues to be higher than those containing both total and low. The use of satellite data also bolsters confidence in the total cloud statistics. Cloud patterns derived from the marine observations and those depicted by satellites show fairly close agreement (U.S. Department of Commerce and United States Air Force, 1971).

The observation count on the graphs is that of observations containing total cloud amount. The low cloud curve on the graph is based on less data than the total cloud curve. This may lead to inconsistencies where the frequency of a specified low cloud amount appears higher than that of total cloud amount. In all cases these were resolved in favor of the total cloud by making the frequency curves coincide.

The cumulative percent frequency of a cloud amount equal to or less than the amount intersected by the curve may be read for total cloud along the solid line or low cloud along the dashed line. The percent frequency of obscurations may be determined by subtracting the cumulative percent frequency corresponding to 8/8 coverage from 100%. The bar graph portion of the graph shows the percent frequency of low cloud amount equal to or greater than 5/8 and equal to or greater than 7/8 for each wind direction and calm. Total sky obscurations are considered as 8/8 coverage for these purposes.

CEILING AND VISIBILITY

Simultaneous ceiling-visibility contingencies are presented in isopleth and tabular form. They are designed as an aid to situations where both vertical and horizontal visibility are the major items of concern. Since an "aircraft" type ceiling value is not available, the ceiling height is estimated from the height of low cloud (h) when the amount of low cloud (N_h) is greater than 4/8. Total sky obscurations are considered to be ceilings. If they are ground-based, they are considered to have a height equal to zero.

WIND - VISIBILITY - CLOUDINESS

This series of charts is designed to give the planner an estimate of the probability of occurrence of certain significant operational conditions. The conditions for optimum and poor carrier operations are those recommended by the users of the earlier atlas series. Of the elements used in these statistics, height of low cloud ceiling has the least reliability in the case of transient ship observations.

It should be noted that in both the contingency tables and the isopleths, the poor carrier operation conditions are *and/or* situations. This means if any one of the poor conditions of ceiling, visibility or wind speed exists, the event is counted as *poor*. However, in the case of optimum conditions it is an *and* situation. That is, the ceiling must be $\geqslant 5000$ feet *and* visibility $\geqslant 5$ nautical miles *and* wind 11-21 knots.

SEA LEVEL PRESSURE AND MEAN WIND

Two sets of wind statistics are presented. The vector mean wind is shown by arrows (direction of flow toward the station dot with the resultant magnitude of the vector plotted at the end of the arrow). The scalar mean speed without regard to direction is shown by isopleth analysis. In areas of high persistence of direction, the magnitude of the mean vector should approximate the scalar mean speed. Pressure graphs and charts are also shown.

nulative percent frequency of a cloud amount r less than the amount intersected by the curve d for total cloud along the solid line or low cloud ashed line. The percent frequency of obscurations termined by subtracting the cumulative percent corresponding to 8/8 coverage from 100%. The bar ion of the graph shows the percent frequency of amount equal to or greater than 5/8 and equal to than 7/8 for each wind direction and calm. Total ations are considered as 8/8 coverage for these

EILING AND VISIBILITY

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- VISIBILITY - CLOUDINESS

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be noted that in both the contingency tables and hs, the poor carrier operation conditions are ations. This means if any one of the poor of ceiling, visibility or wind speed exists, the event as *poor*. However, in the case of optimum t is an *and* situation. That is, the ceiling must be *and* visibility $\geq$ 5 nautical miles *and* wind 11-21

SEA LEVEL PRESSURE AND MEAN WIND

of wind statistics are presented. The vector mean own by arrows (direction of flow toward the with the resultant magnitude of the vector the end of the arrow). The scalar mean speed ard to direction is shown by isopleth analysis. In h persistence of direction, the magnitude of the r should approximate the scalar mean speed. phs and charts are also shown.

WAVES (<1.5 AND <2.5 METERS)

In these analyses, the higher of the sea or swell is selected for summarization. If the heights are equal, the wave with the longer period is selected. The graphs accompanying the low wave charts (<1.5 and <2.5 meters) show wave height versus wave direction. The bar graph and the percent scale at the top of the chart give the percent frequency of waves from each direction. Indeterminate directions are combined with calms. The percent frequency of wave heights (bottom scale) may be read for each height interval and wave direction from the contingency table. The isopleth analyses of the percent frequency of heights <1.5 and <2.5 meters are for generally non-hazardous sea conditions.

WAVES ($\geq$3.5 AND $\geq$6 METERS)

Wave heights in the $\geqslant 3.5$ and $\geqslant 6$ meter range represent increasingly hazardous conditions. Contingency tables of wave period versus wave height accompany these charts.

LOW PRESSURE CENTERS

The roses, tracks and cyclogenetical areas are based on nine years of track charts (January 1966-December 1974) prepared by the National Meteorological Center. These charts show cyclone tracks based on 6-hourly positions of closed centers. During the past decade, the added dimension of satellite surveillance has helped to improve the reliability of analyses over the oceans. The addition of the later data has confirmed the general positions of the tracks shown by Klein (1957) but some minor adjustments appear to be warranted.

Frequencies of cyclone centers passing through 2½ degree "squares" were analyzed to obtain the mean tracks. Primary tracks were selected along the axes of maximum frequency and secondary tracks were selected along axes where there was a moderate frequency.

The origins (first reported closed position) were plotted by 2½ degree "squares" and then analyzed to find regions of cyclogenesis (only formation, not intensification). In order to show that the depicted areas are general as opposed to specific, no borders are drawn around them.

The legend shows how to read the roses. In the model, the figure printed at the end of each bar represents the mean speed of movement (in knots) of all storms which moved toward that direction. The scale is given by arcs of circles labeled in percentage. The arcs of circles are also labeled in speed and refer to the mean vector movement as represented by the dot. The top figure within the inner circle represents the number of 12-hour storm movements in the quadrangle during the period of record. The bottom figure indicates the number of individual storms used in the computations.

TROPICAL CYCLONES

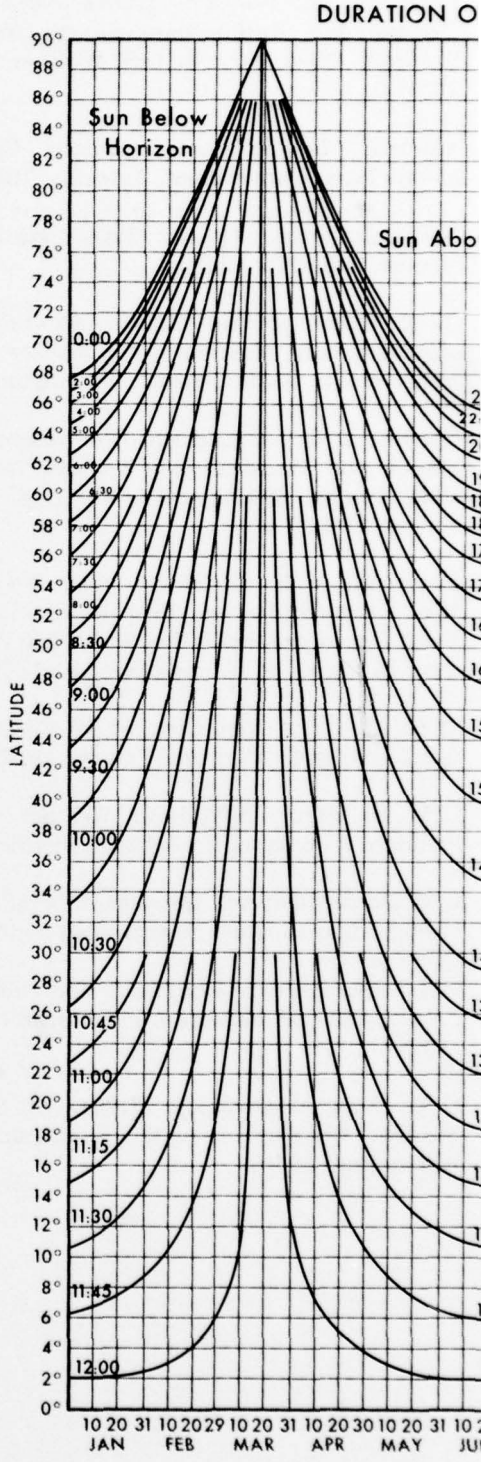
The data base used for the *Mariners Worldwide Climatic Guide to Tropical Storms at Sea*, NAVAIR 50-1C-61, 1974, was updated through 1974 and used for generating the tropical cyclone movement roses in this atlas. The data presented here by 5° quadrangle include all tropical cyclones estimated to have wind speeds greater than 33 knots. The period of record is 1844-1974 for the Western North Pacific and 1949-1974 for the Eastern North Pacific. The reader is referred to the above mentioned "Guide" for more detailed information.

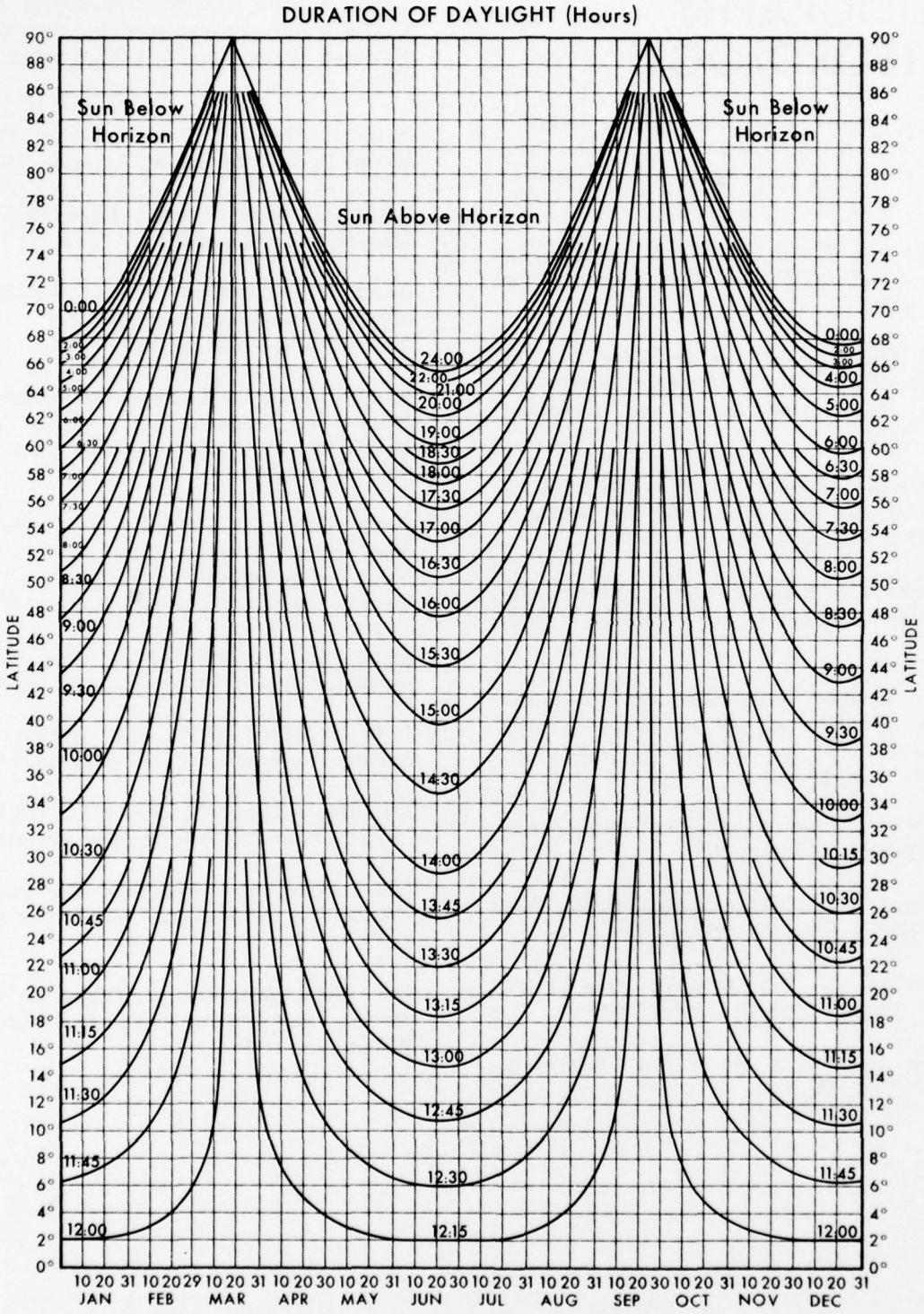
TROPICAL CYCLONE CHARACTERISTICS

The broad open arrows on the chart depicts the tracks preferred by tropical storms with the width of the arrows being proportional to the storm frequency along the track. The top value in each 5° quadrangle is the constancy, computed by dividing the 12-hour vector resultant mean storm speed by the 12-hour scalar mean speed and multiplying by 100. This gives a relative measure of confidence in directional persistence when used in conjunction with the number of 12-hour storm movements. The bottom value is the average number of storms (relative frequency) per year per time period. Red isolines show the mean scalar storm speed in knots while the blue track limit indicates the area in which most tropical storms spawn and die.

DURATION OF DAYLIGHT

The Duration of Daylight Chart for the Northern Hemisphere defines daylight as the period from sunrise to sunset. As an example, the daylight on July 20 of any year at 48° N is about 15 hours and 30 minutes for any longitude. The data source was the U.S. Naval Observatory (1945), and is accurate for the entire 20th Century. Further details may be obtained from *The Daylighter* by the Navy Weather Research Facility (1960). Additional light (during twilight) may be usable for many purposes. Duration of daylight in high latitudes (poleward of about 60°) becomes increasingly dependent upon atmospheric conditions and refraction and there may be some departure from the values depicted on the charts.




DURATION OF DAYLIGHT (Hours)
Sun Below Horizon
Sun Above Horizon
Sun Below Horizon
LATITUDE
LATITUDE
0:00
2:00
3:00
4:00
5:00
6:00
6:30
7:00
7:30
8:00
8:30
9:00
9:30
10:00
10:30
10:45
11:00
11:15
11:30
11:45
12:00
24:00
22:00
21:00
20:00
19:00
18:30
18:00
17:30
17:00
16:30
16:00
15:30
15:00
14:30
14:00
13:45
13:30
13:15
13:00
12:45
12:30
12:15
10 20 31 JAN
10 20 29 FEB
10 20 31 MAR
10 20 30 APR
10 20 31 MAY
10 20 30 JUN
10 20 31 JUL
10 20 31 AUG
10 20 30 SEP
10 20 31 OCT
10 20 30 NOV
10 20 31 DEC

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PART II - OCEANOGRAPHY

CURRENTS

The surface current charts have been adapted from published atlases based on data compiled from ship drift reports that were forwarded by various merchant marines to the Naval Oceanographic Office. From these drift observations the sets and average speeds of the prevailing currents are calculated for each 1° quadrangle. The surface current charts presented in this atlas are an accurate representation of the general current regime of the North Pacific Ocean as derived from this data source; however, more detailed information is available in publications of the U.S. Naval Oceanographic Office.

Considerable variations from the directions and speeds of the indicated prevailing currents can be expected, especially in areas where the current system is weak. The currents are most accurately represented along the major shipping lanes where the density of observations is the greatest.

TIDES

The information presented on the charts (types of tides and corange lines) was derived from tide tables, tables of harmonic constants and published atlases. Although general in nature, a reasonably reliable picture of the tidal regimes is shown. For more specific tidal information and predictions, tide tables should be consulted.

ICE

Sea Ice

The ice limits shown on the charts were derived from previously published atlases and reflect the average mid-month conditions. Actual concentration boundaries may vary widely from the averages under the influence of changing meteorological and oceanographic situations.

The freeze-up and break up data were compiled from observations through 1972.

Glacier Ice

The only glacier ice observed in the North Pacific is confined to the Gulf of Alaska.

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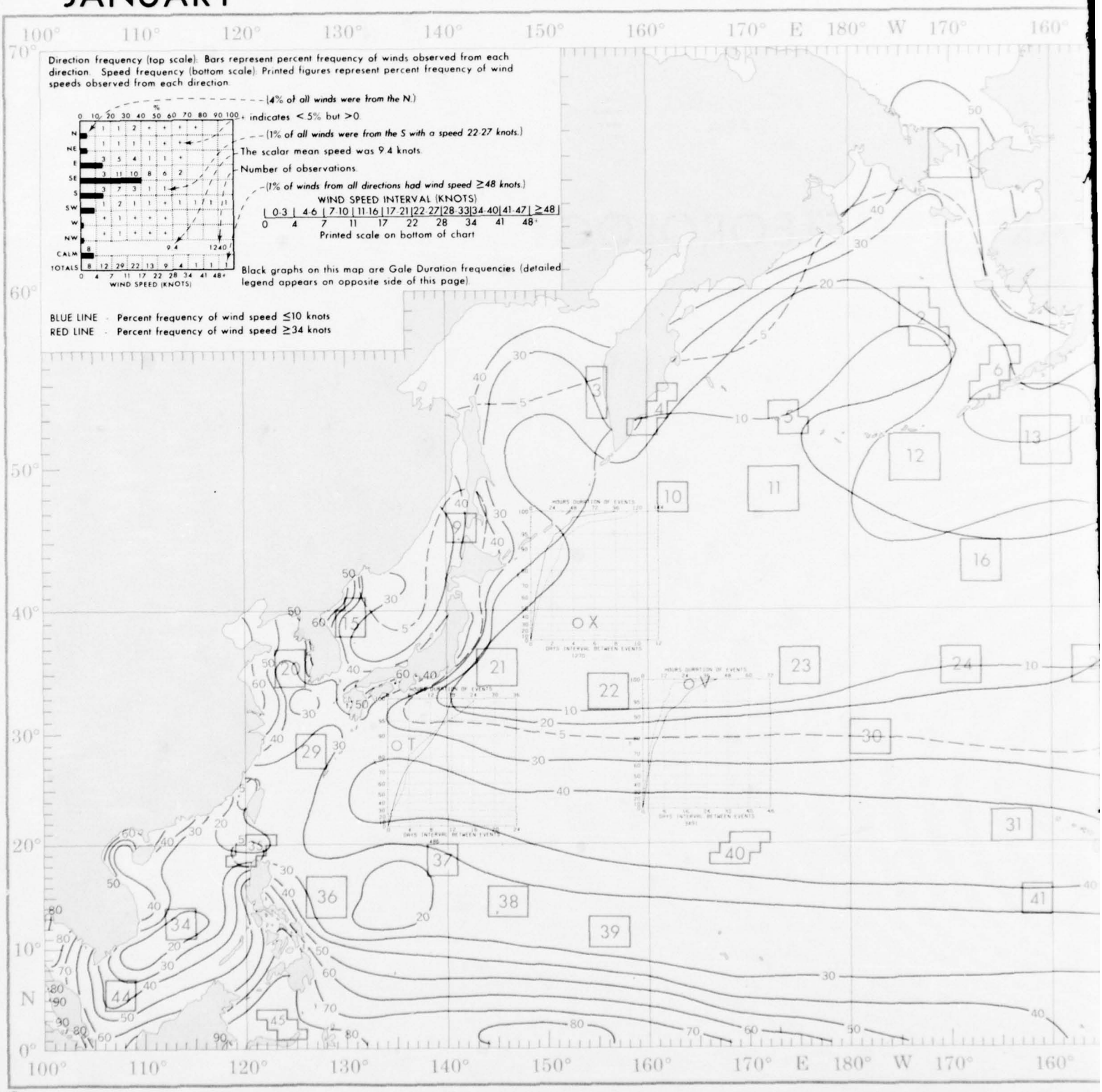
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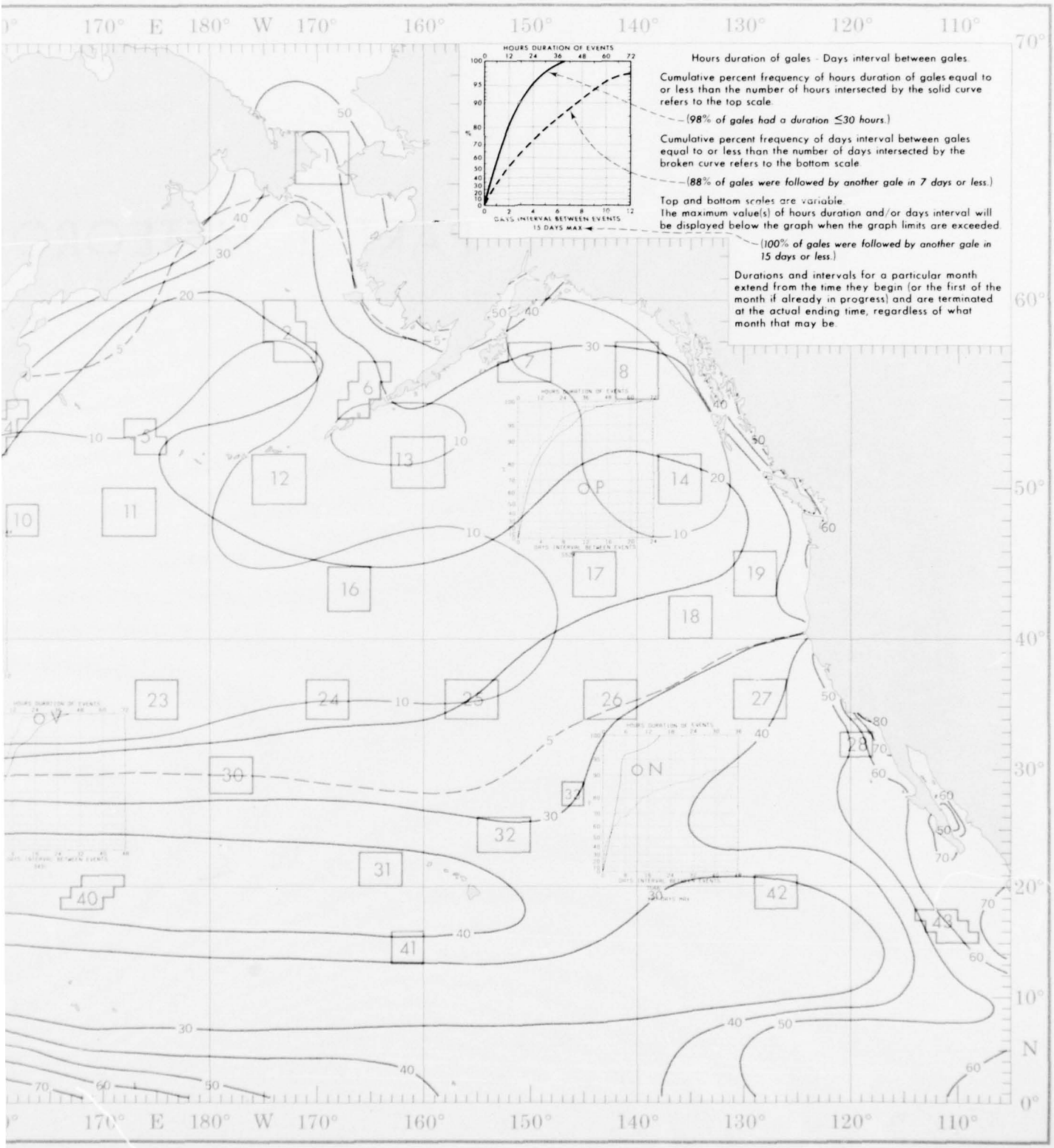
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PART I METEOROLOGY

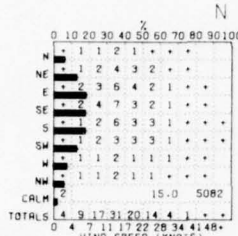
JANUARY

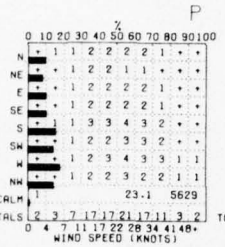

Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
+ indicates < 5% but > 0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
WIND SPEED (KNOTS)
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page)
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

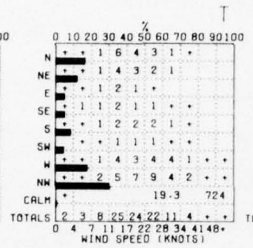
SURFACE WINDS

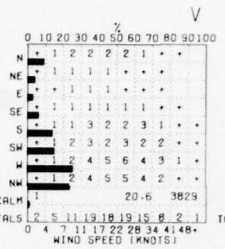


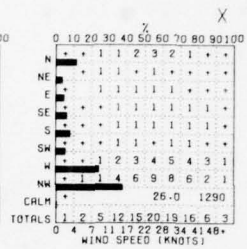
WIND DIRECTION AND SPEED



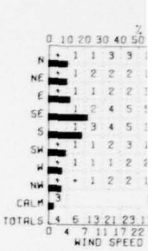


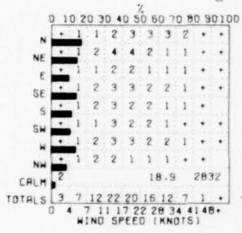


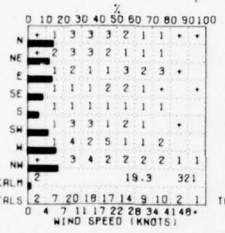


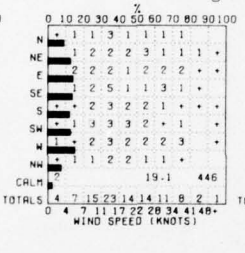


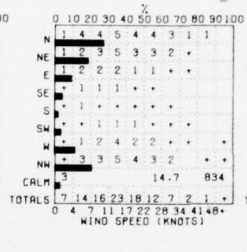
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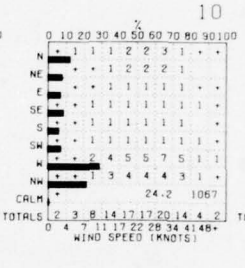


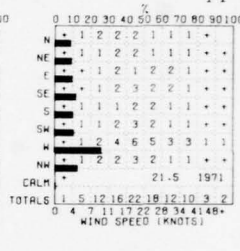


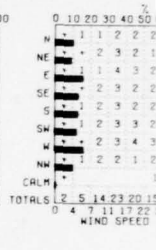


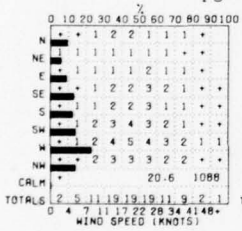


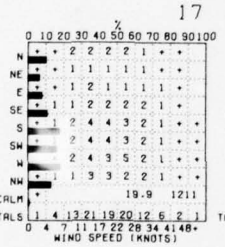


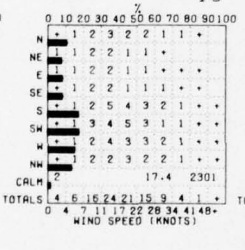


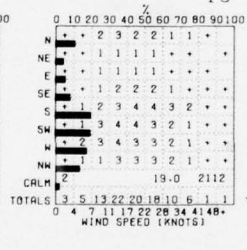


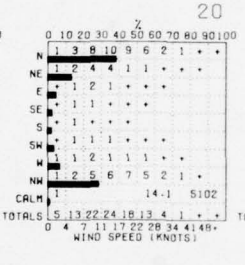


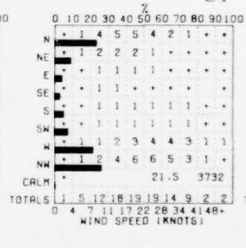


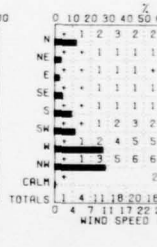


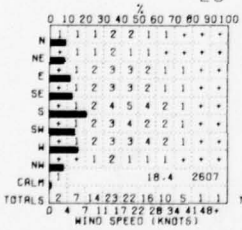


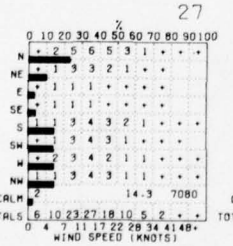


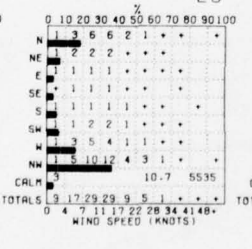


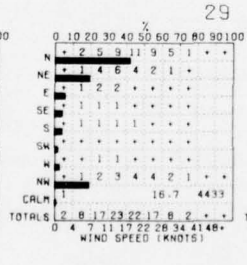


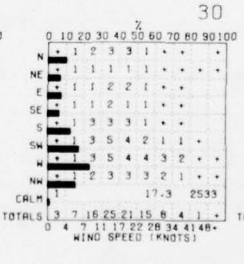


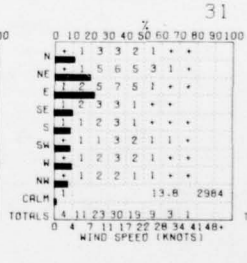


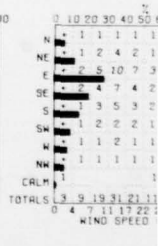


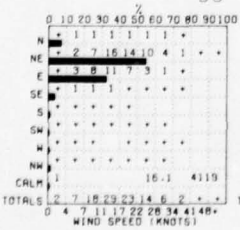


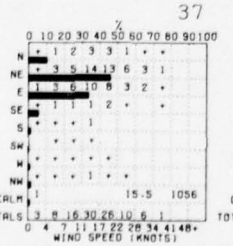


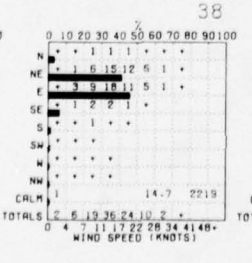


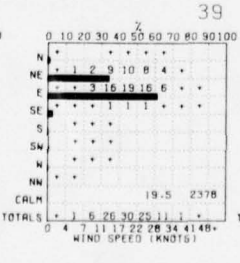


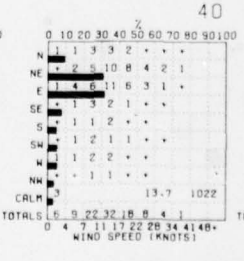


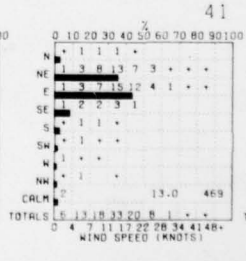


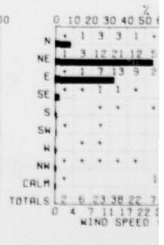






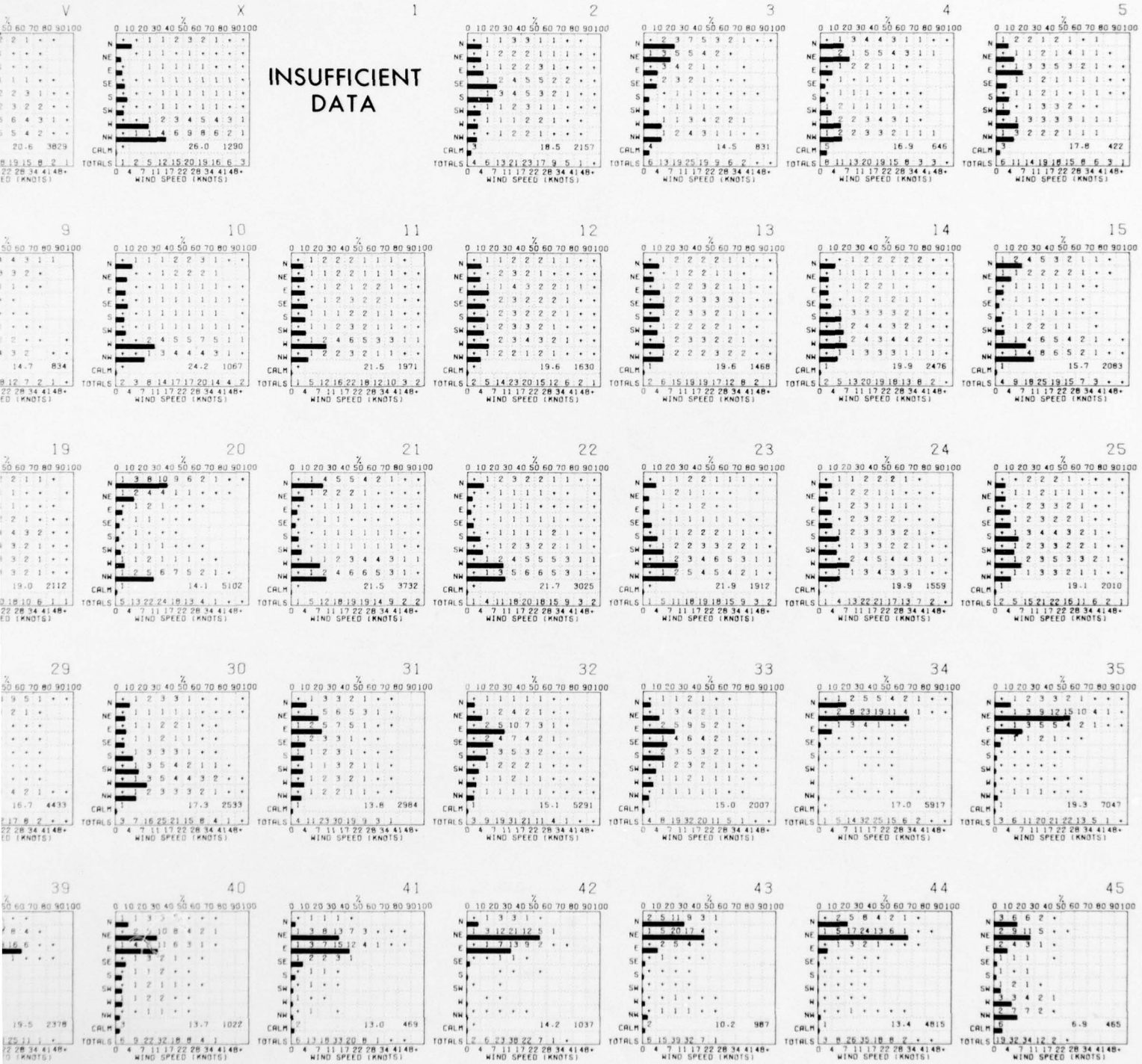






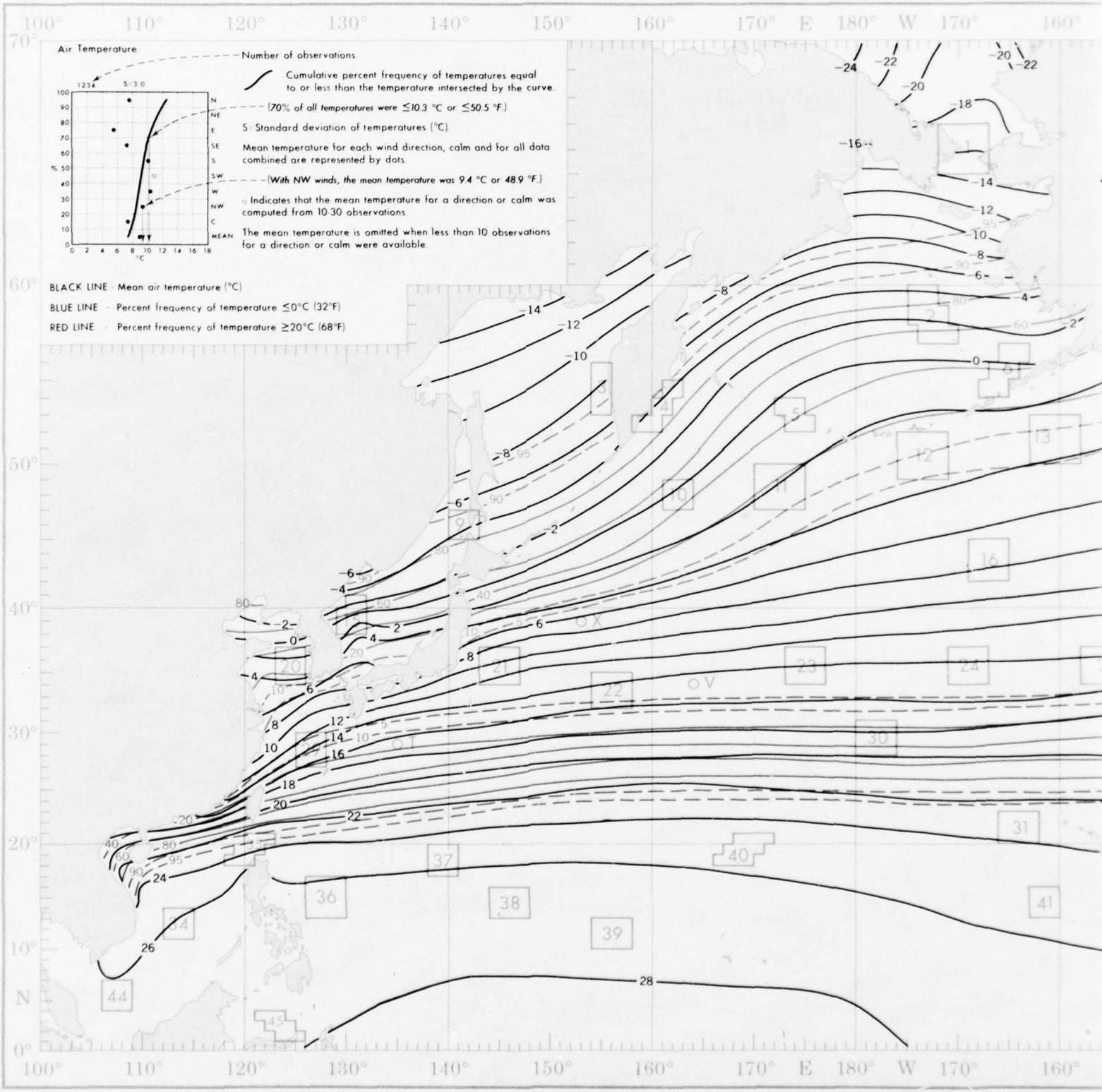
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

JANUARY

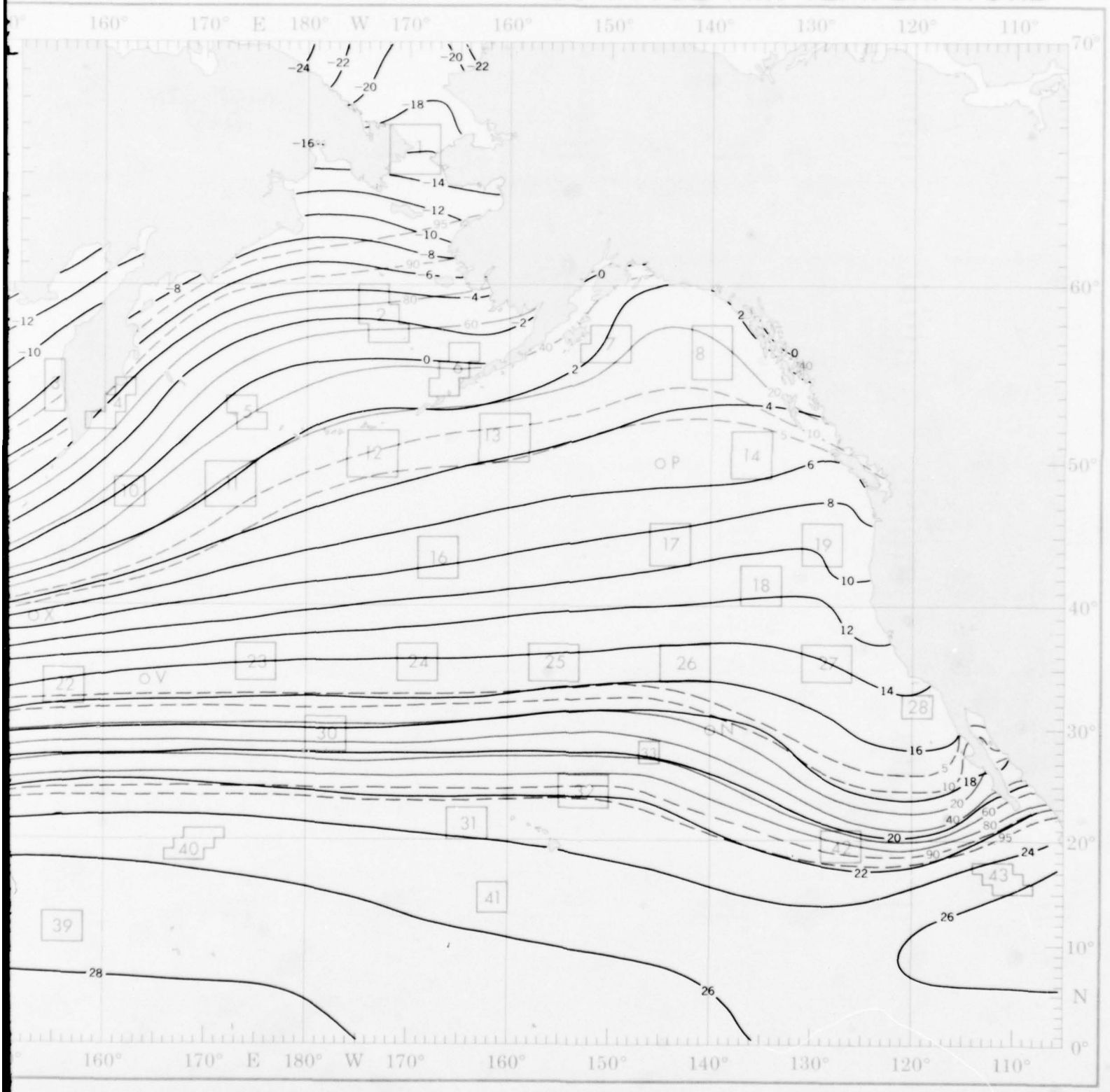


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

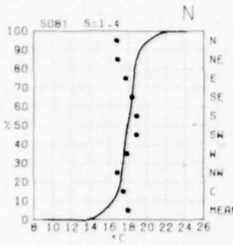
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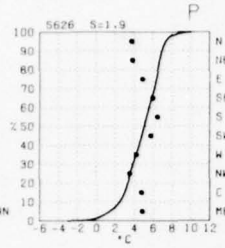

Air Temperature.
Number of observations.
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)

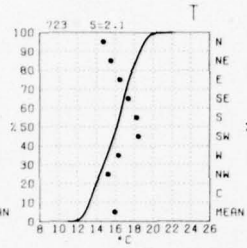
SURFACE AIR TEMPERATURE

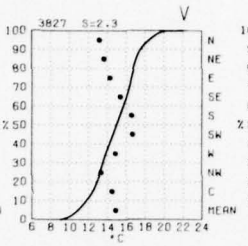


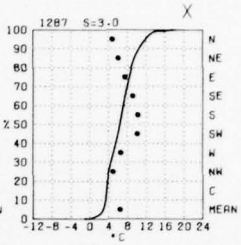
SURFACE AIR TEMPERATURE



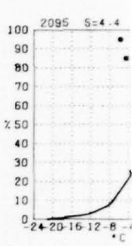


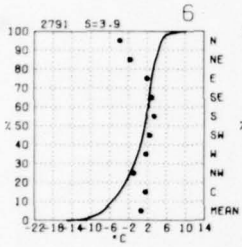


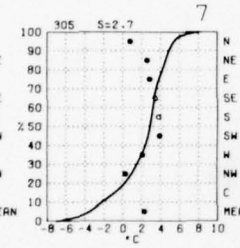


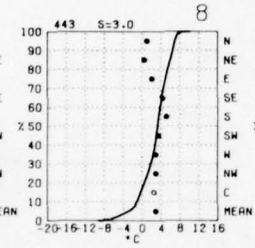


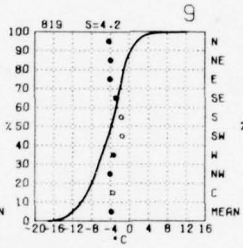
INSUFFICIENT DATA

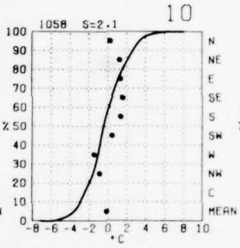


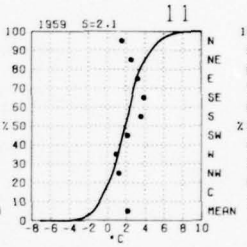


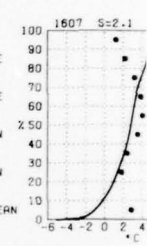


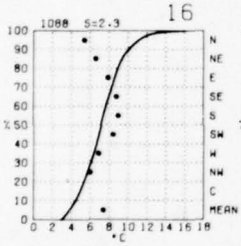


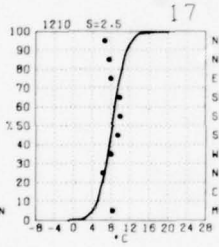


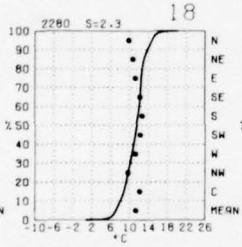


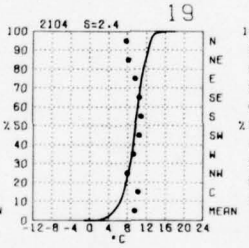


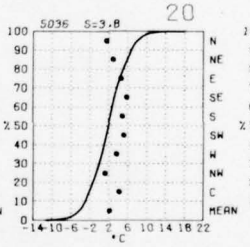


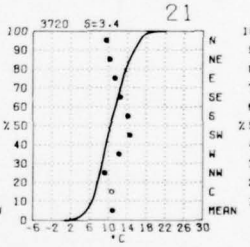


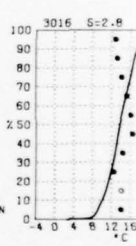


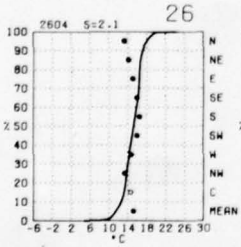


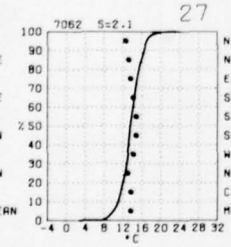


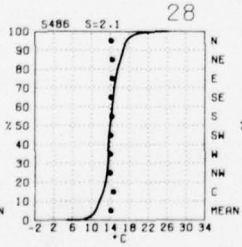


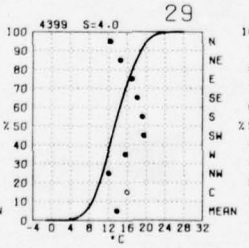


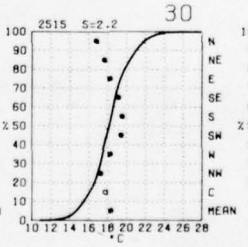


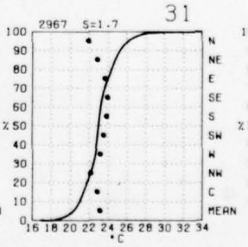


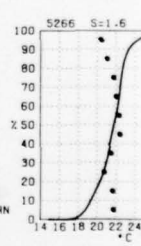


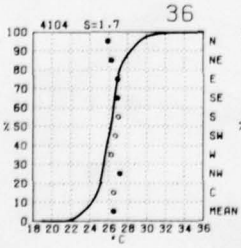


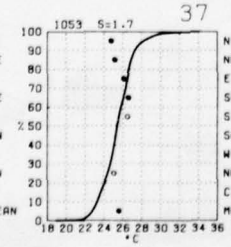


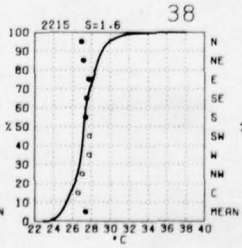


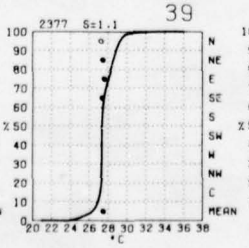


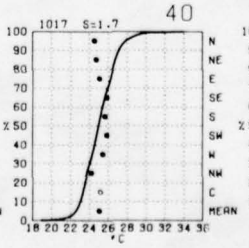


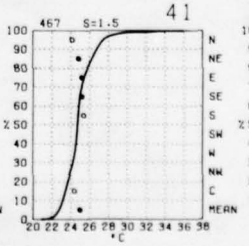


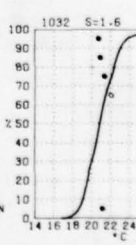






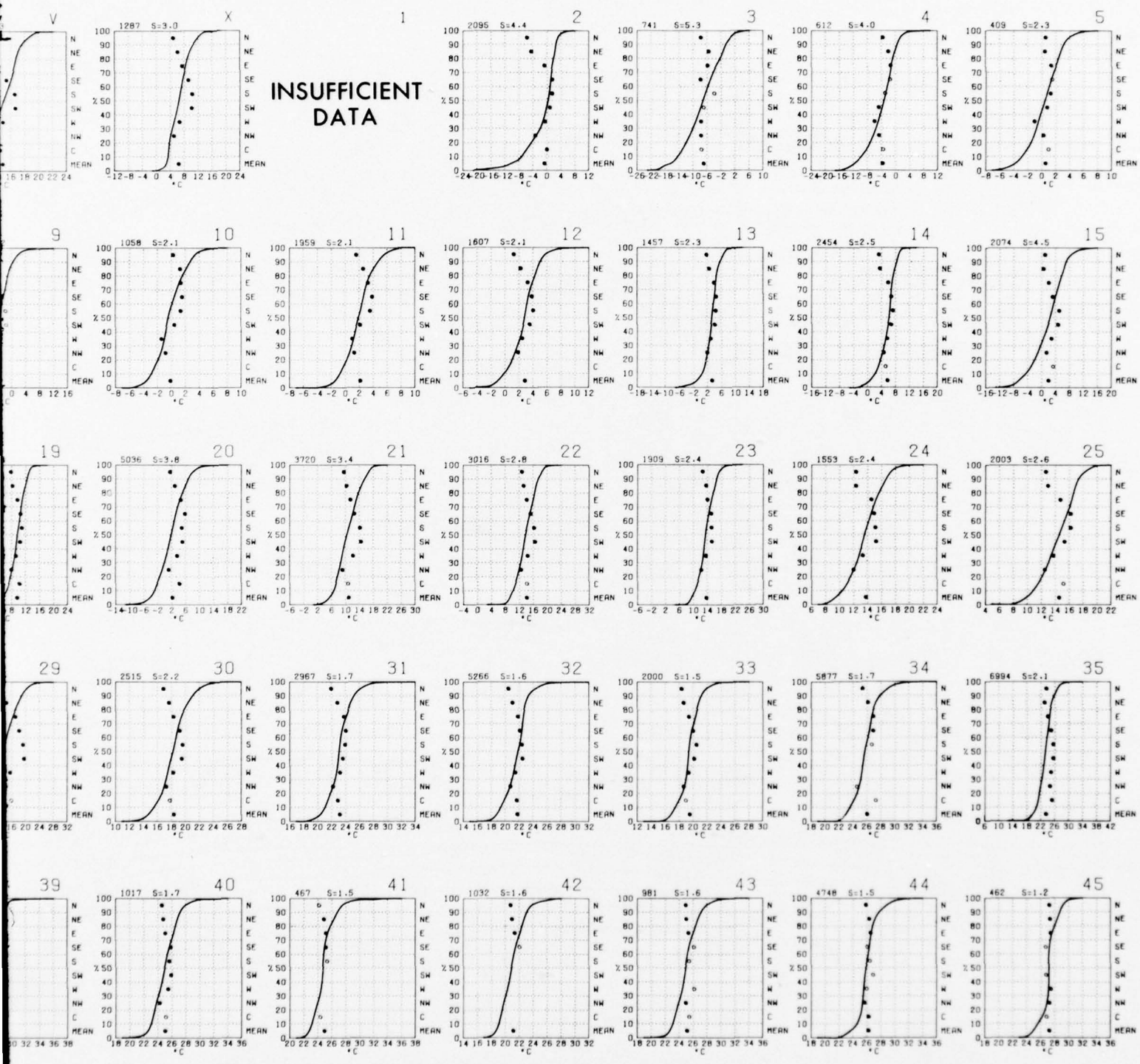






Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

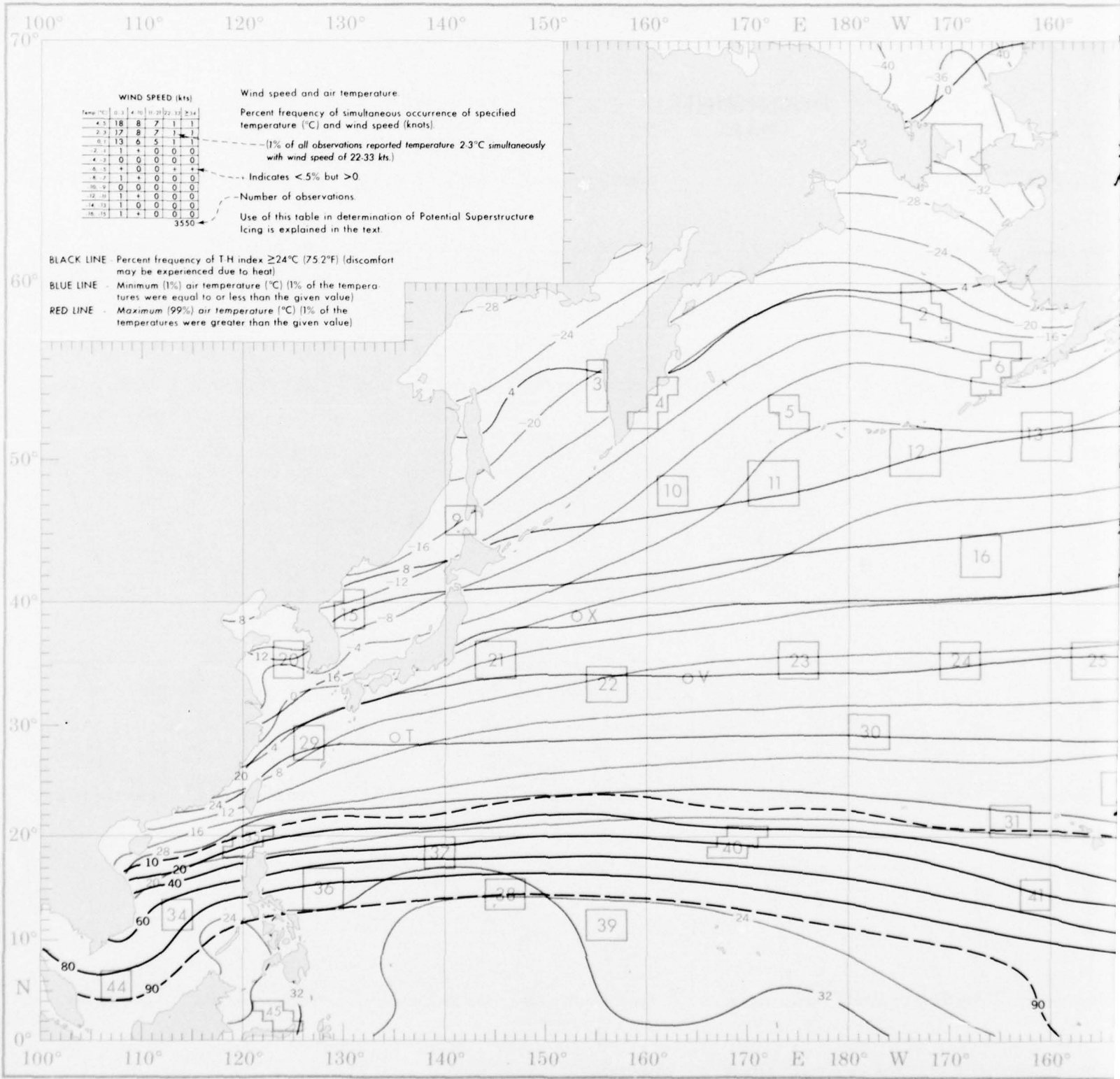
JANUARY



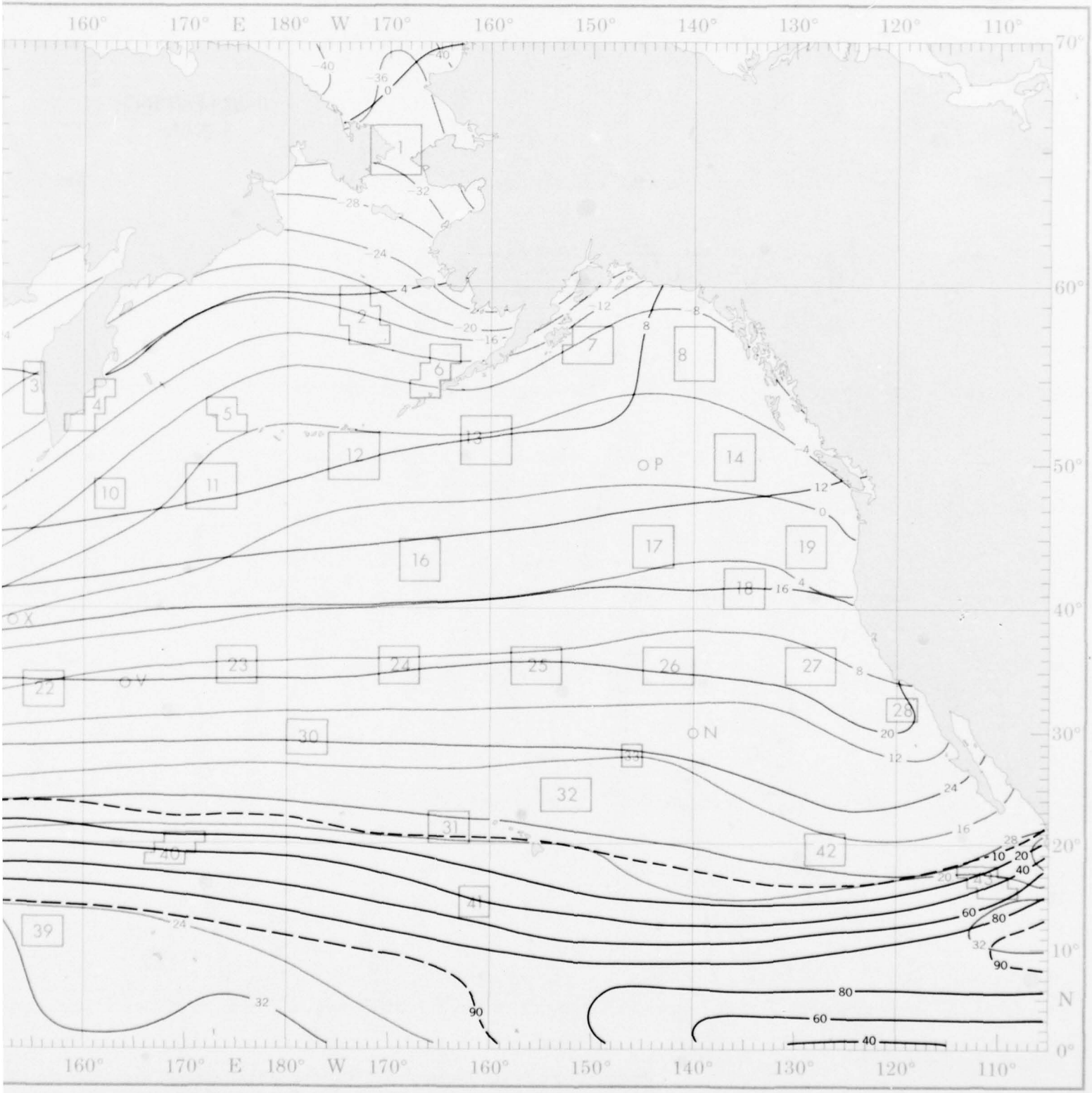
objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY

TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	+	+
20.21	+	2	7	3	+
18.19	2	13	26	9	1
16.17	2	10	16	5	+
14.15	+	1	2	1	+
12.13	0	+	+	0	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

5081

P

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	+	+
8.9	+	+	1	4	1
6.7	+	3	13	16	6
4.5	1	4	13	11	5
2.3	+	3	5	5	3
0.1	+	+	1	1	1
-2.-1	+	+	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

5626

T

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	1	1	+
18.19	1	2	12	8	1
16.17	1	5	19	9	2
14.15	1	3	10	7	1
12.13	0	+	7	7	0
10.11	0	0	0	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

723

V

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	+
18.19	+	1	4	6	2
16.17	+	5	11	11	3
14.15	1	5	11	9	2
12.13	1	5	8	7	2
10.11	+	1	2	2	1
8.9	0	+	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

3827

X

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	+	+
14.15	0	0	+	+	1
12.13	0	+	1	2	2
10.11	0	+	2	3	3
8.9	+	2	8	7	4
6.7	1	3	7	10	6
4.5	+	2	5	7	5
2.3	+	+	4	9	4
0.1	0	0	0	+	+
-2.-1	0	0	0	+	+
-4.-3	0	0	0	0	0

1287

1

INSUFFICIENT DATA

TEMP (°C)	WIND
6.7	
4.5	
2.3	
0.1	
-2.-1	
-4.-3	
-6.-5	
-8.-7	
-10.-9	
-12.-11	
≤-13	

6

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	+	0
8.9	+	+	+	+	0
6.7	+	1	1	1	+
4.5	+	4	9	5	2
2.3	1	6	12	7	2
0.1	1	4	8	4	1
-2.-1	+	2	4	3	1
-4.-3	+	1	3	3	1
-6.-5	0	+	2	2	+
-8.-7	+	+	1	2	1
≤-9	0	+	+	2	1

2792

7

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	0	1	0
6.7	0	1	2	1	1
4.5	0	9	8	8	3
2.3	2	12	16	7	3
0.1	+	3	5	4	1
-2.-1	+	2	2	1	1
-4.-3	+	1	2	1	2
-6.-5	0	0	1	1	1
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

305

8

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
8.9	0	1	1	+	+
6.7	1	4	10	4	2
4.5	1	7	7	6	3
2.3	2	6	11	7	2
0.1	+	3	4	4	1
-2.-1	+	1	3	2	1
-4.-3	0	1	1	+	+
-6.-5	0	0	1	1	1
-8.-7	0	0	0	1	+
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

443

9

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	0
8.9	0	0	0	0	0
6.7	0	+	+	+	0
4.5	0	+	1	+	+
2.3	1	2	2	+	0
0.1	1	5	5	2	+
-2.-1	2	5	7	5	1
-4.-3	1	5	9	5	1
-6.-5	1	4	6	2	0
-8.-7	1	4	6	2	+
≤-9	1	5	3	1	+

819

10

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
6.7	0	0	+	+	+
4.5	+	1	2	1	1
2.3	1	2	6	8	4
0.1	+	3	9	11	5
-2.-1	+	4	12	12	7
-4.-3	0	1	3	5	2
-6.-5	0	0	0	1	+
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

1058

11

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	+	1
6.7	0	1	2	2	1
4.5	+	3	7	7	3
2.3	+	7	14	10	5
0.1	1	4	11	7	3
-2.-1	+	1	4	3	2
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	+
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1959

TEMP (°C)	WIND
10.11	
8.9	
6.7	
4.5	
2.3	
0.1	
-2.-1	
-4.-3	
-6.-5	
-8.-7	
-10.-9	

16

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	0	0	+	+	+
12.13	+	1	1	1	+
10.11	+	2	4	4	1
8.9	1	4	11	10	3
6.7	1	7	14	10	3
4.5	+	3	7	4	2
2.3	0	+	+	1	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1088

17

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	0	+	+	+	0
14.15	0	+	+	+	+
12.13	+	1	3	4	1
10.11	+	4	11	8	2
8.9	+	6	14	8	2
6.7	+	5	9	8	1
4.5	+	2	2	3	1
2.3	+	+	1	1	+
0.1	0	+	0	+	0
-2.-1	0	0	0	+	0

1213

18

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	+	+	+	0	0
16.17	+	+	1	1	+
14.15	1	2	7	3	1
12.13	1	10	18	8	1
10.11	1	6	11	6	1
8.9	1	3	6	4	1
6.7	+	1	2	2	1
4.5	0	+	+	+	+
2.3	0	0	+	0	0
0.1	0	0	+	0	0

2282

19

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	+	+	0
14.15	0	+	+	1	+
12.13	+	3	7	6	2
10.11	2	6	15	9	3
8.9	1	6	13	6	1
6.7	+	2	5	4	1
4.5	0	+	2	2	+
2.3	+	0	+	1	+
0.1	0	+	0	+	0
-2.-1	0	0	0	0	+
-4.-3	0	0	0	0	0

2104

20

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	0	+	+	+	0
12.13	+	+	+	0	0
10.11	+	1	1	+	0
8.9	+	3	2	+	+
6.7	1	6	5	1	0
4.5	1	6	6	2	+
2.3	1	9	10	3	+
0.1	1	5	7	3	+
-2.-1	+	3	6	4	+
≤-3	+	1	4	4	1

5036

21

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	+
18.19	0	+	+	1	1
16.17	+	1	3	3	2
14.15	+	1	4	4	2
12.13	+	4	8	6	3
10.11	+	4	8	6	2
8.9	+	4	8	7	2
6.7	+	1	4	4	1
4.5	0	+	1	1	1
2.3	+	+	+	+	+
0.1	0	0	0	+	0

3720

TEMP (°C)	WIND
24.25	
22.23	
20.21	
18.19	
16.17	
14.15	
12.13	
10.11	
8.9	
6.7	
≤5	

26

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	+	+	+	+	+
18.19	+	2	5	4	1
16.17	1	7	18	11	2
14.15	1	7	13	6	2
12.13	1	5	7	4	1
10.11	+	1	2	1	+
8.9	0	+	+	+	+
6.7	0	+	+	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2605

27

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	0	0	0
22.23	+	+	+	0	0
20.21	+	+	+	+	0
18.19	+	1	1	+	0
16.17	1	6	10	3	+
14.15	2	11	13	4	1
12.13	2	11	14	5	1
10.11	+	3	5	2	+
8.9	+	+	1	1	+
6.7	0	+	+	+	+
4.5	0	+	+	0	0

7062

28

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	+	+	+	0	0
22.23	+	+	+	0	0
20.21	+	+	+	0	0
18.19	1	2	1	+	0
16.17	2	10	7	1	+
14.15	3	16	15	2	+
12.13	3	14	12	2	+
10.11	+	3	2	+	+
8.9	+	1	+	+	+
6.7	+	+	+	0	0

5493

29

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	+	+	+	+	0
22.23	+	1	1	+	0
20.21	+	3	3	+	0
18.19	+	5	5	1	+
16.17	+	5	8	2	+
14.15	+	4	8	4	1
12.13	1	4	9	6	+
10.11	+	2	7	6	+
8.9	+	1	4	4	1
≤7	0	+	2	2	+

4403

30

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	+	1	+	0
22.23	+	2	3	1	+
20.21	1	5	10	4	+
18.19	1	9	18	8	2
16.17	1	5	11	8	2
14.15	+	1	3	1	1
12.13	0	+	+	+	+
10.11	0	0	+	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2517

31

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	+	1	+	+	0
26.27	1	3	4	+	0
24.25	1	11	16	3	+
22.23	2	16	21	6	+
20.21	+	4	7	2	+
18.19	+	+	+	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2974

TEMP (°C)	WIND
32.33	
30.31	
28.29	
26.27	
24.25	
22.23	
20.21	
18.19	
16.17	
14.15	
12.13	

36

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	+	0
32.33	+	+	+	+	0
30.31	+	1	2	+	0
28.29	+	5	11	2	+
26.27	1	14	28	10	1
24.25	+	3	10	7	1
22.23	+	+	1	1	+
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

4104

37

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	+	1	+	0
28.29	+	3	5	1	+
26.27	2	12	25	7	1
24.25	+	7	20	6	+
22.23	+	2	4	2	+
20.21	0	+	+	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1053

38

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	+	+	1	+	0
30.31	+	2	4	+	0
28.29	1	9	23	3	0
26.27	1	13	29	8	+
24.25	+	1	4	1	0
22.23	0	0	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2216

39

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	+	+	+	0
30.31	+	1	2	+	0
28.29	+	2	25	17	+
26.27	+	4	27	18	+
24.25	+	+	1	+	0
22.23	0	0	0	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2377

40

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	+	0	0
30.31	+	+	+	0	0
28.29	+	2	4	1	0
26.27	2	10	18	4	+
24.25	3	13	18	4	+
22.23	+	5	9	3	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1018

41

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	0	+	0	0
30.31	0	+	0	0	0
28.29	1	2	+	+	0
26.27	2	9	15	2	+
24.25	4	16	33	6	+
22.23	+	3	4	+	0
20.21	0	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

470

TEMP (°C)	WIND
28.29	
26.27	
24.25	
22.23	
20.21	
18.19	
16.17	
14.15	
12.13	

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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JANUARY

INSUFFICIENT DATA

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	+	+
14.15	0	0	+	+	1
12.13	0	+	1	2	2
10.11	0	+	2	3	3
8.9	+	2	8	7	4
6.7	1	3	7	10	6
4.5	+	2	5	7	5
2.3	+	+	4	9	4
0.1	0	0	0	+	+
-2.-1	0	0	0	+	+
-4.-3	0	0	0	0	0

1287

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	+	+	+	0
4.5	+	1	2	1	+
2.3	1	6	15	8	2
0.1	1	5	12	8	2
-2.-1	+	3	4	4	1
-4.-3	+	2	3	1	+
-6.-5	+	2	3	1	+
-8.-7	0	1	3	1	+
-10.-9	+	+	1	1	+
-12.-11	+	+	+	+	+
-14.-13	+	+	+	1	+

2095

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	+	+	+	0	+
2.3	+	1	2	1	0
0.1	1	3	4	1	+
-2.-1	+	6	4	1	+
-4.-3	+	2	4	2	1
-6.-5	1	5	7	3	1
-8.-7	1	3	7	2	+
-10.-9	1	2	7	2	+
-12.-11	+	4	3	1	+
-14.-13	1	3	3	1	0
-16.-15	1	3	4	1	0

741

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	+	+	0	0
4.5	0	+	+	+	0
2.3	+	1	2	2	+
0.1	2	5	7	5	1
-2.-1	2	5	7	5	1
-4.-3	2	5	9	2	1
-6.-5	1	4	5	2	1
-8.-7	1	1	4	3	+
-10.-9	1	3	5	3	+

620

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	+	+	0	+	+
4.5	+	2	3	2	1
2.3	+	3	9	5	2
0.1	3	8	11	7	4
-2.-1	2	5	9	6	1
-4.-3	0	1	3	1	+
-6.-5	0	0	1	+	0
-8.-7	0	0	0	+	+
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

409

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	+	1
6.7	0	1	2	1	1
4.5	+	3	7	7	3
2.3	+	7	14	10	5
0.1	1	4	11	7	3
-2.-1	+	1	4	3	2
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	+
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1959

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	+	1	+	0
6.7	+	2	4	4	1
4.5	1	6	12	8	2
2.3	1	7	17	10	4
0.1	+	3	7	4	1
-2.-1	+	1	2	1	1
-4.-3	0	+	+	+	+
-6.-5	0	+	+	+	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1607

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	+	+	1	+
6.7	+	3	6	5	2
4.5	1	8	15	9	3
2.3	1	7	12	8	3
0.1	1	2	3	3	2
-2.-1	0	+	1	1	1
-4.-3	+	0	+	1	+
-6.-5	0	+	1	+	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1457

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	0	+	+	0	0
10.11	0	+	1	1	+
8.9	+	3	5	8	2
6.7	1	8	16	11	3
4.5	1	4	8	5	1
2.3	+	2	3	4	1
0.1	+	+	2	1	1
-2.-1	+	+	+	1	1
-4.-3	0	0	+	+	+
-6.-5	0	0	0	0	0

2455

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	+	+	+	+
12.13	+	+	+	+	+
10.11	0	+	1	+	0
8.9	+	1	3	1	+
6.7	1	5	8	3	+
4.5	1	5	8	3	+
2.3	1	6	8	4	+
0.1	+	4	6	3	1
-2.-1	+	3	4	1	+
-4.-3	+	3	6	2	1

2074

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	0	0	0	0
4.5	+	1	2	1	1
2.3	1	2	6	8	4
0.1	+	3	9	11	5
-2.-1	+	4	12	12	7
-4.-3	0	1	3	5	2
-6.-5	0	0	0	1	+
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

1058

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	+	1
6.7	0	1	2	2	1
4.5	+	3	7	7	3
2.3	+	7	14	10	5
0.1	1	4	11	7	3
-2.-1	+	1	4	3	2
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	+
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1959

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	+	1	+	0
6.7	+	2	4	4	1
4.5	1	6	12	8	2
2.3	1	7	17	10	4
0.1	+	3	7	4	1
-2.-1	+	1	2	1	1
-4.-3	0	+	+	+	+
-6.-5	0	+	+	+	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1607

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	+	+	1	+
6.7	+	3	6	5	2
4.5	1	8	15	9	3
2.3	1	7	12	8	3
0.1	+	2	3	3	2
-2.-1	0	+	1	1	1
-4.-3	+	0	+	1	+
-6.-5	0	+	1	+	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1457

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	0	+	+	0	0
10.11	0	+	1	1	+
8.9	+	3	5	8	2
6.7	1	8	16	11	3
4.5	1	4	8	5	1
2.3	+	2	3	4	1
0.1	+	+	2	1	1
-2.-1	+	+	+	1	1
-4.-3	0	0	+	+	+
-6.-5	0	0	0	0	0

2455

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	+	+	+	+
12.13	+	+	+	+	+
10.11	0	+	1	+	0
8.9	+	1	3	1	+
6.7	1	5	8	3	+
4.5	1	5	8	3	+
2.3	1	6	8	4	+
0.1	+	4	6	3	1
-2.-1	+	3	4	1	+
-4.-3	+	3	6	2	1

2074

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	+
18.19	0	+	1	+	0
16.17	+	1	3	3	2
14.15	+	1	4	4	2
12.13	+	4	8	6	3
10.11	+	4	8	6	2
8.9	+	4	8	7	2
6.7	+	1	4	4	1
4.5	0	+	1	1	1
2.3	+	+	+	+	+
0.1	0	0	0	+	0

3720

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	0	0	+	+	0
20.21	+	+	1	1	+
18.19	+	1	4	4	2
16.17	+	3	8	7	3
14.15	+	4	8	7	2
12.13	+	4	10	8	3
10.11	+	2	4	4	2
8.9	+	+	1	1	1
6.7	0	+	+	+	+
4.5	0	+	0	0	+

3016

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	+	+	+	0
18.19	+	1	2	2	1
16.17	+	4	8	7	3
14.15	+	6	9	7	3
12.13	1	5	12	10	4
10.11	+	1	4	6	3
8.9	0	+	1	1	1
6.7	0	0	0	+	+
4.5	0	0	0	0	+
2.3	0	0	0	0	0

1909

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	+	+	+	0
18.19	+	1	2	1	+
16.17	+	4	11	6	2
14.15	+	4	12	8	1
12.13	+	5	12	9	3
10.11	+	2	5	5	2
8.9	+	+	1	1	1
6.7	0	0	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1553

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	1	+	+
18.19	+	3	5	3	+
16.17	1	6	13	8	2
14.15	1	5	11	7	2
12.13	+	5	8	5	2
10.11	+	2	4	3	1
8.9	0	+	1	1	+
6.7	0	0	+	0	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

2003

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	+	1	+	0
22.23	+	+	2	3	1
20.21	1	5	10	4	+
18.19	1	9	18	8	2
16.17	1	5	11	8	2
14.15	+	1	3	1	1
12.13	0	+	+	+	+
10.11	0	0	+	+	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2517

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	+	1	+	+	0
26.27	1	3	4	+	0
24.25	1	11	16	3	+
22.23	2	16	21	6	+
20.21	+	4	7	2	+
18.19	+	+	+	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2974

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	0	0	0	0
28.29	0	+	+	0	0
26.27	+	1	1	+	+
24.25	+	3	5	1	+
22.23	1	13	26	7	+
20.21	1	9	17	4	+
18.19	+	2	4	2	+
16.17	+	+	+	+	+
14.15	0	0	0	+	+
12.13	0	0	0	0	0

5266

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	+	+	0
22.23	+	3	4	1	+
20.21	1	12	21	7	1
18.19	2	12	22	5	1
16.17	+	1	4	2	+
14.15	0	+	+	+	+
12.13	0	0	0	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2000

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	0	+	1	0	0
30.31	+	1	2	+	0
28.29	+	3	9	2	+
26.27	+	10	29	8	1
24.25	+	4	16	9	1
22.23	0	+	2	2	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5877

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	1	+	0
26.27	1	4	7	3	+
24.25	1	8	16	10	1
22.23	+	2	12	14	2
20.21	0	+	4	6	2
18.19	0	+	1	1	+
16.17	0	0	+	+	+
14.15	0	0	+	0	0
12.13	0	0	0	0	0

6995

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	0	+	1	0	0
30.31	+	1	2	+	0
28.29	+	3	9	2	+
26.27	+	10	29	8	1
24.25	+	4	16	9	1
22.23	0	+	2	2	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5877

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	1	+	0
26.27	1	4	7	3	+
24.25	1	8	16	10	1
22.23	+	2	12	14	2
20.21	0	+	4	6	2
18.19	0	+	1	1	+
16.17	0	0	+	+	+
14.15	0	0	+	0	0
12.13	0	0	0	0	0

6995

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	0	0	+	0	0
30.31	+	0	0	0	0
28.29	+	0	+	0	0
26.27	2	10	18	4	+
24.25	3	13	18	4	+
22.23	+	5	9	3	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1018

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	0	+	0	0
30.31	0	+	0	0	0
28.29	1	2	+	+	0
26.27	2	9	15	2	+
24.25	4	16	33	6	+
22.23	+	3	4	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

470

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	1	+	0
24.25	+	3	2	+	0
22.23	1	9	20	3	+
20.21	1	12	29	4	0
18.19	+	4	9	2	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1032

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	2	4	2	0	0
26.27	2	19	12	+	0
24.25	2	24	18	+	0
22.23	+	6	6	+	0
20.21	0	1	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

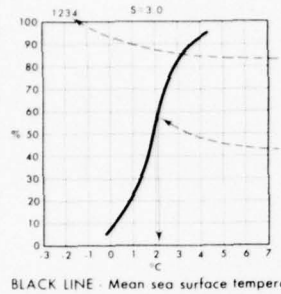
981

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	1	0	0
28.29	0	24	6	+	0
26.27	11	37	7	0	0
24.25	1	3	1	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

462

jective compilation of available data for specified areas without regard to suspected biases.
posite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY



Sea surface temperature

Number of observations

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

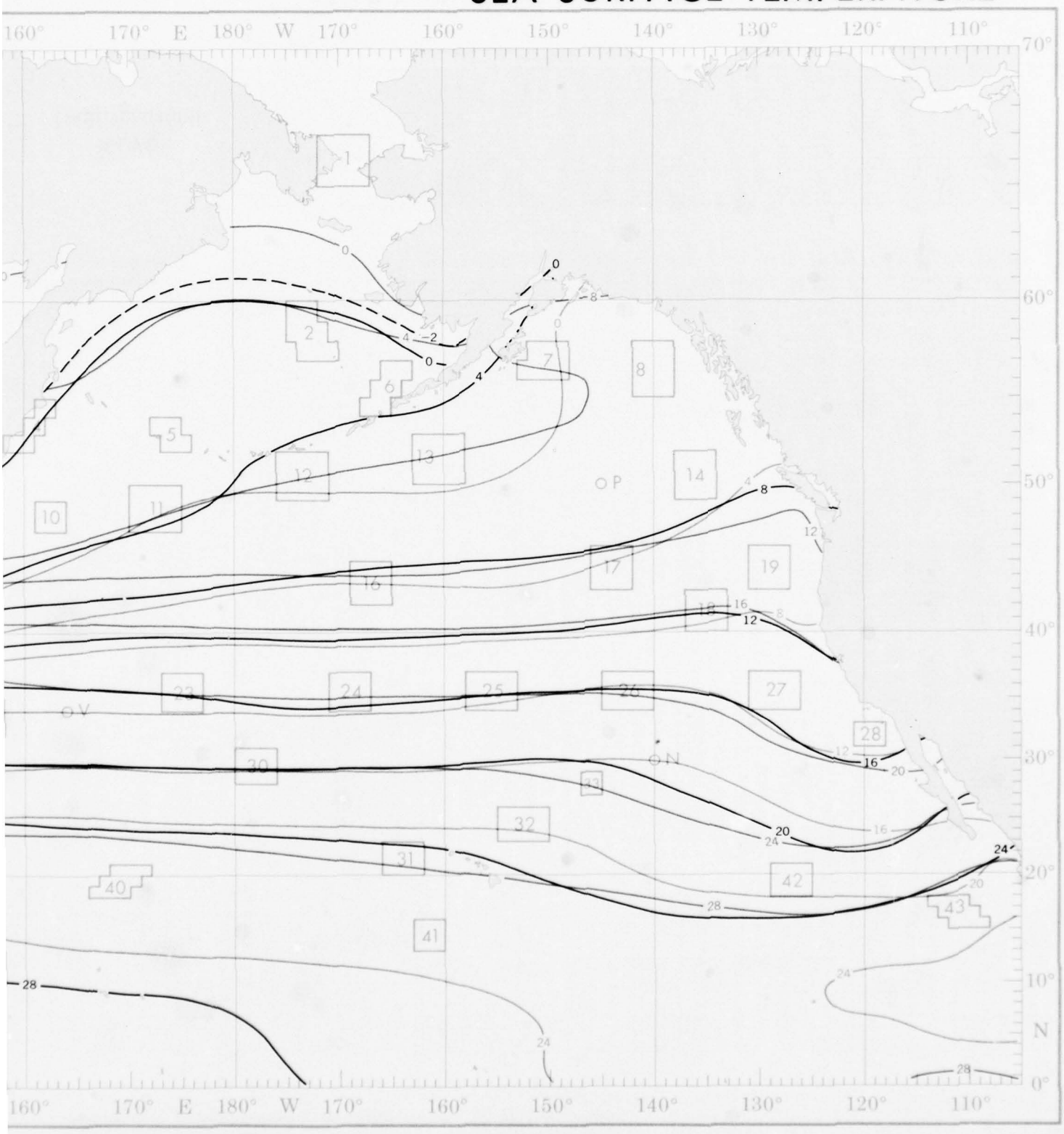
S = Standard deviation of sea surface temperatures (°C).

BLACK LINE - Mean sea surface temperature (°C)

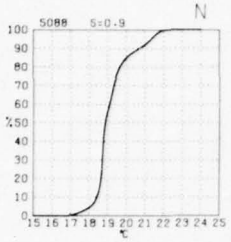
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

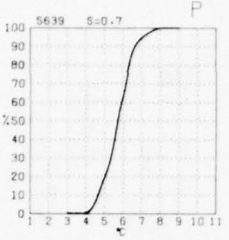
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

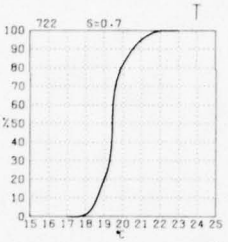
SEA SURFACE TEMPERATURE

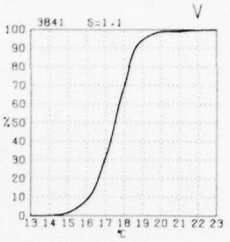


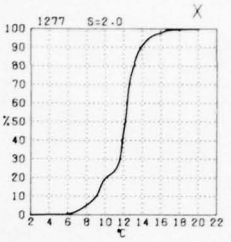
SEA SURFACE TEMPERATURE



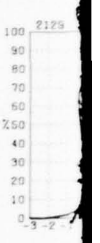


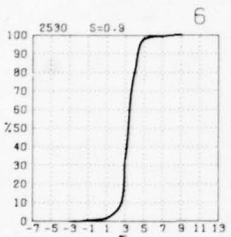


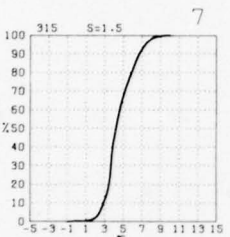


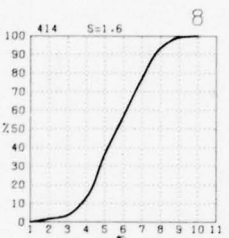


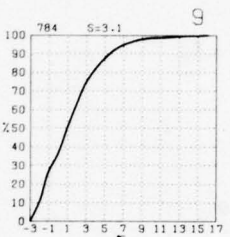
INSUFFICIENT DATA

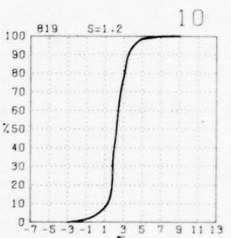


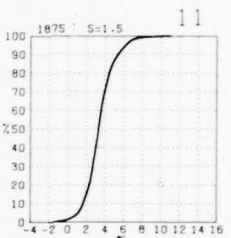


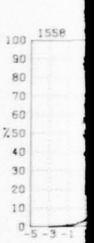


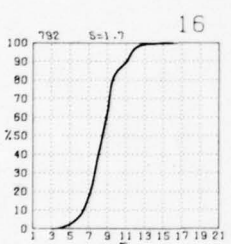


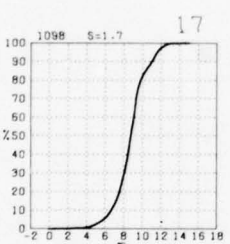


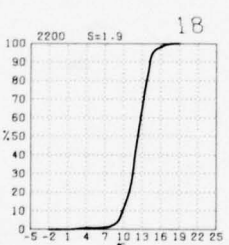


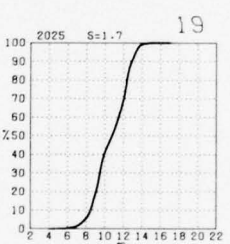


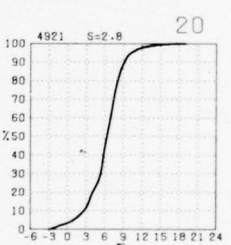


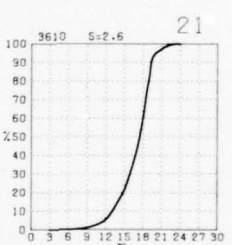


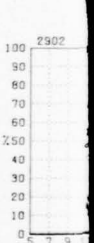


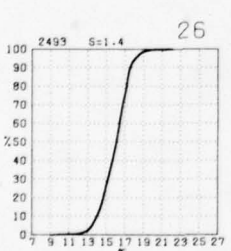


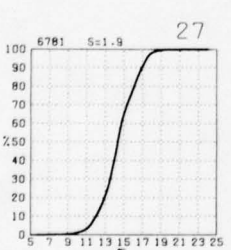


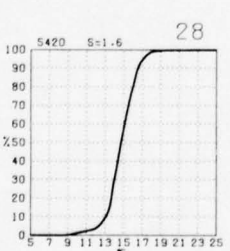


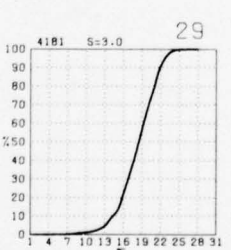


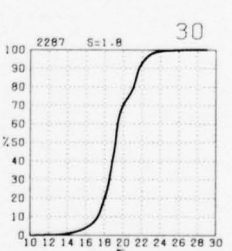


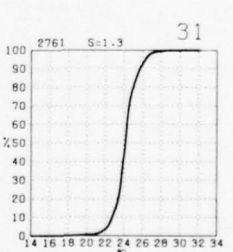


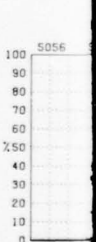


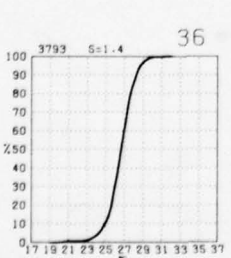


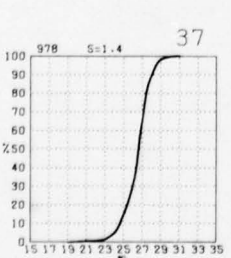


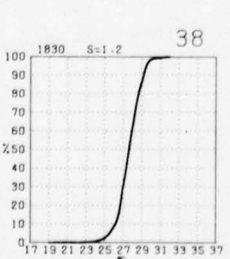


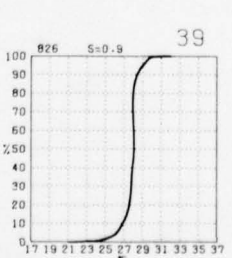


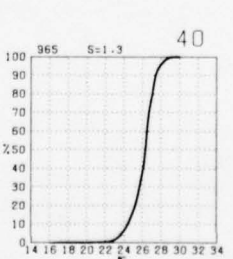


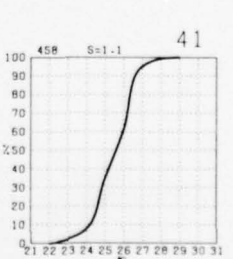


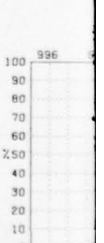






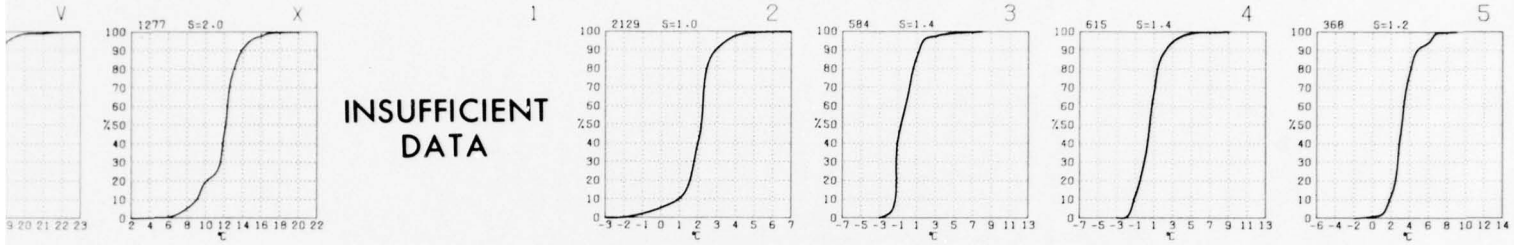


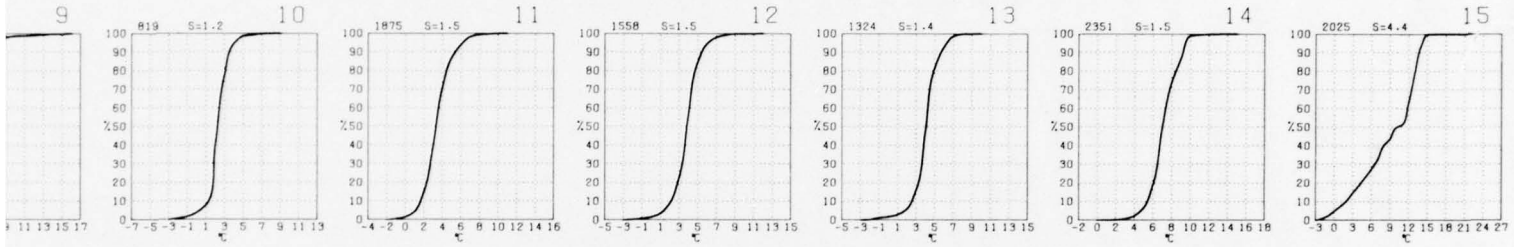


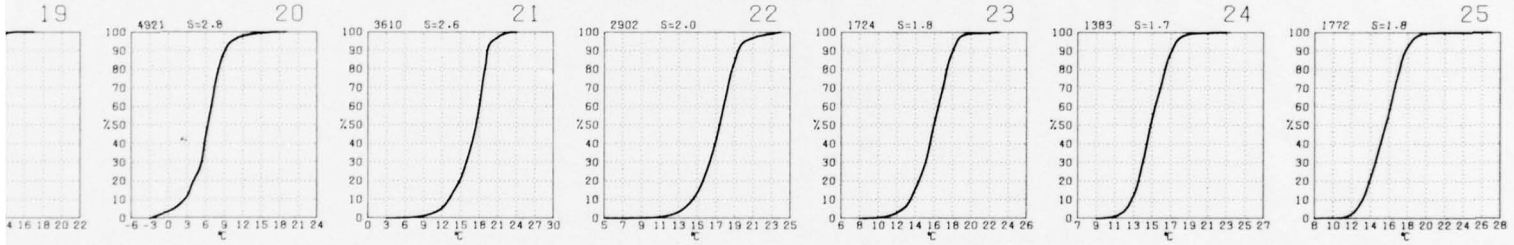


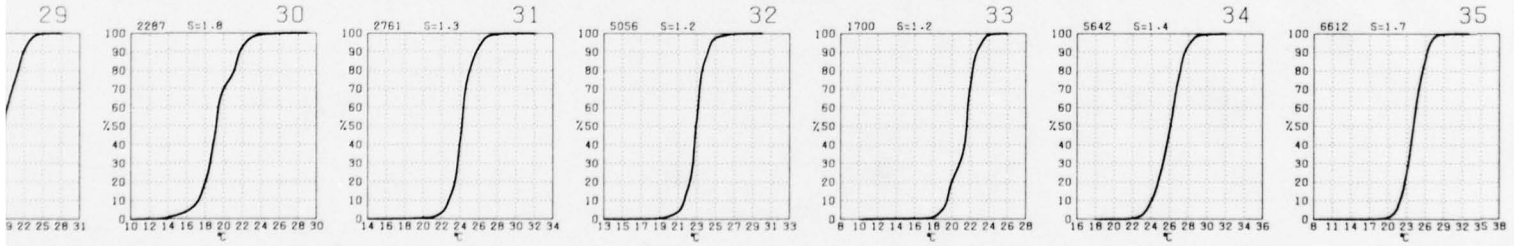
Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

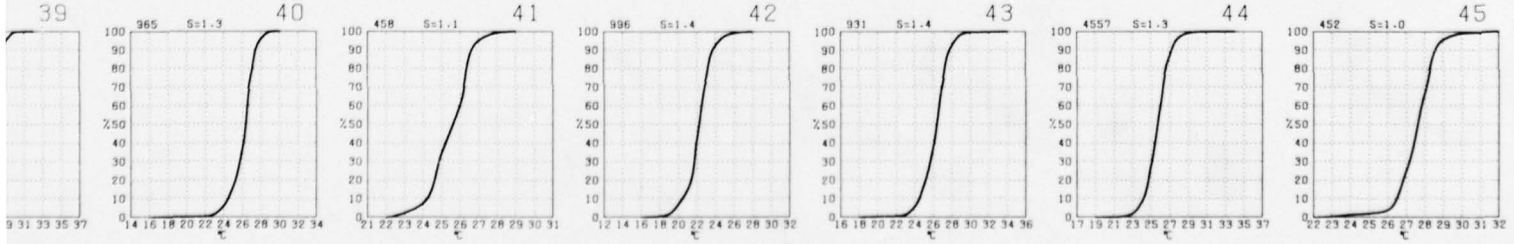
JANUARY





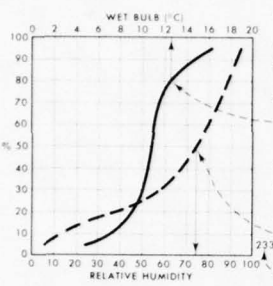






objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY



Wet bulb - Relative humidity

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C)

(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

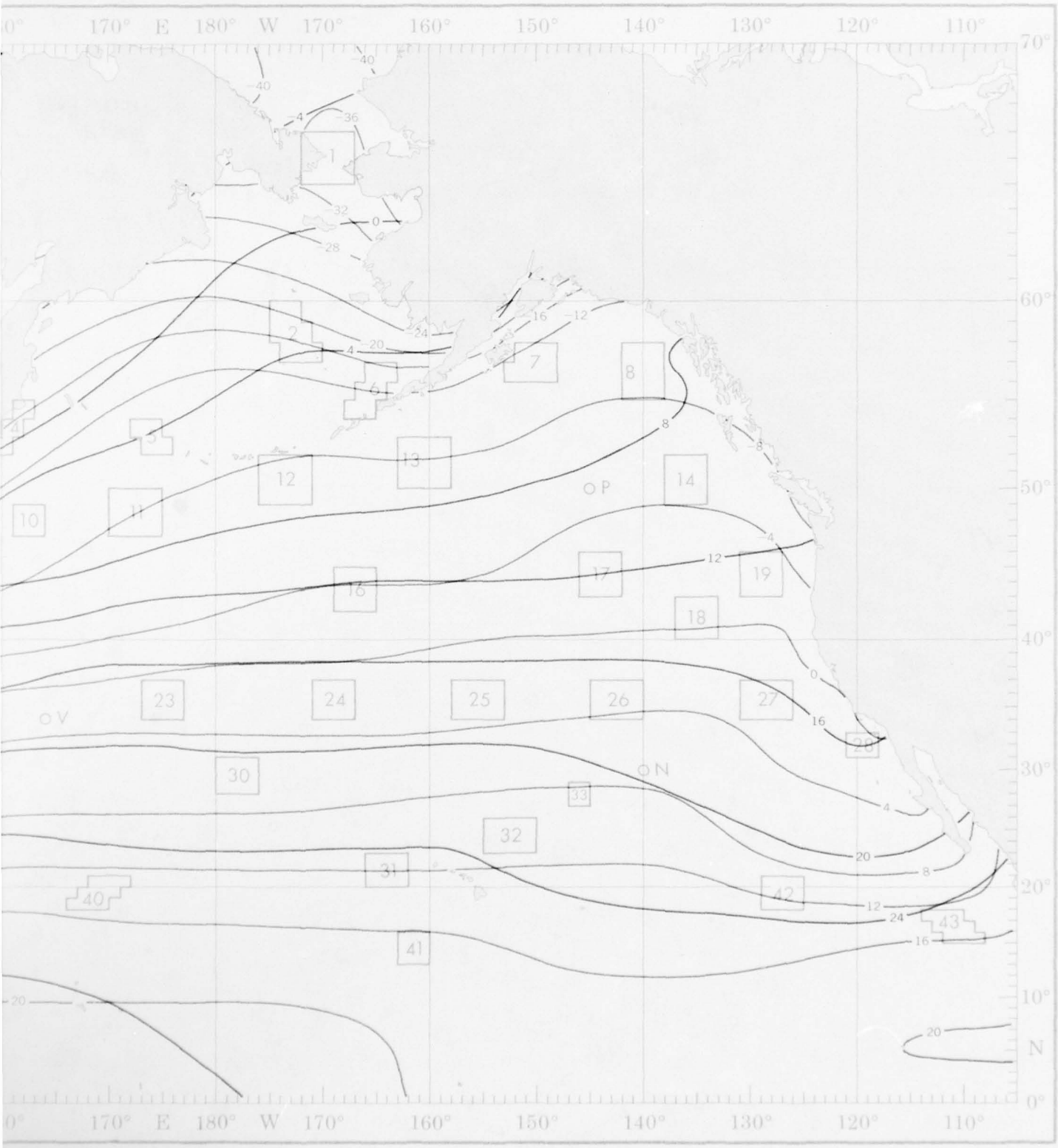
(50% of all observed relative humidities were ≤74%.)

Number of observations.

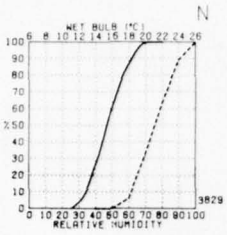
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

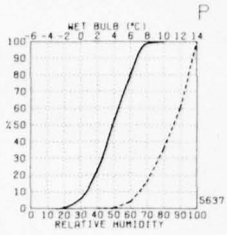
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

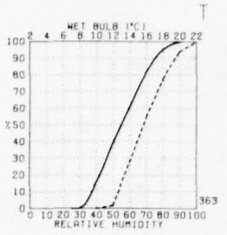
HUMIDITY

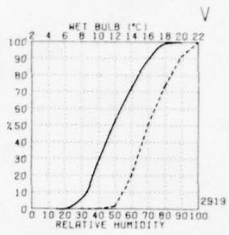

170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
OP
OV
ON
1
2
3
4
5
6
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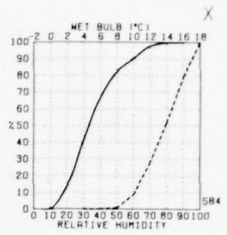
WET BULB AND RELATIVE HUMIDITY



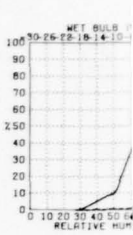


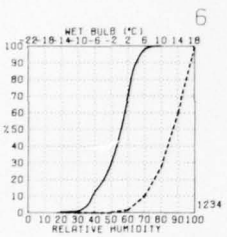


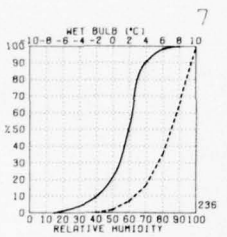


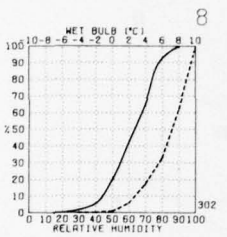


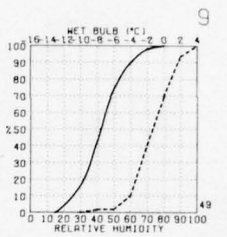
INSUFFICIENT DATA

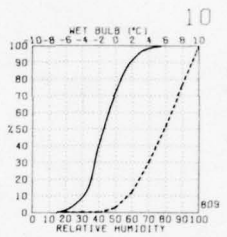


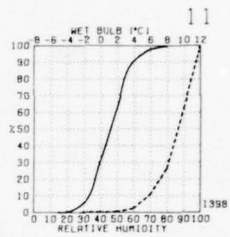


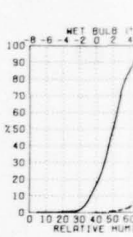


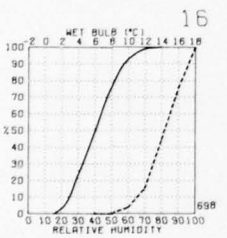


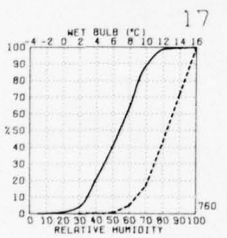


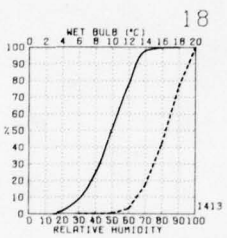


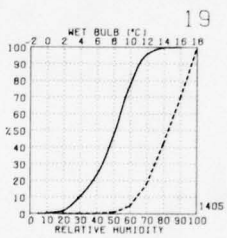


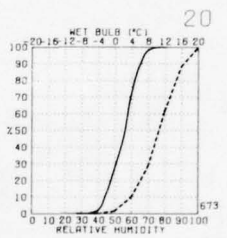


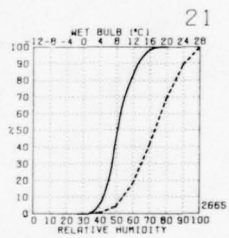


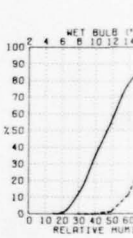


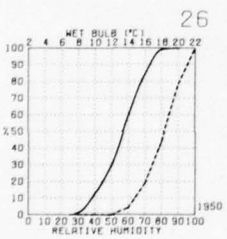


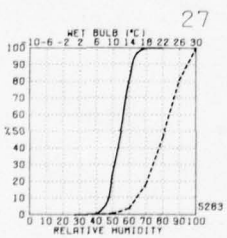


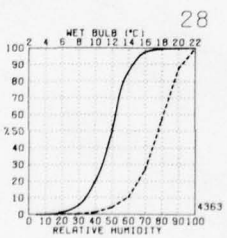


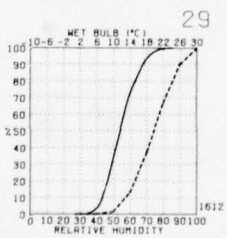


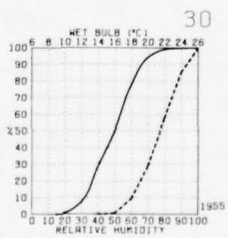


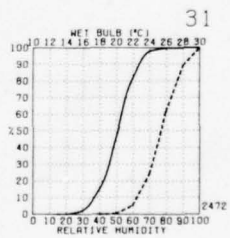


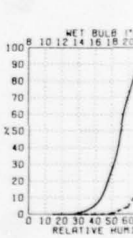


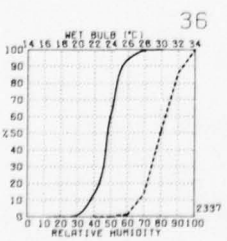


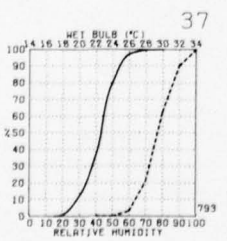


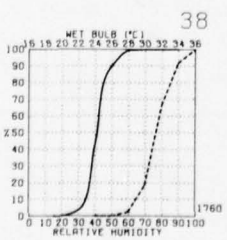


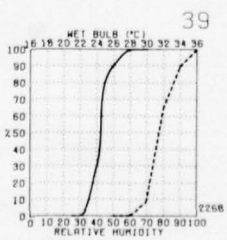


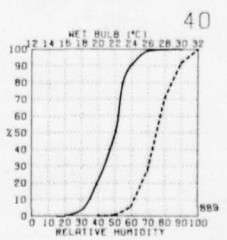


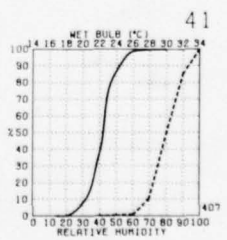


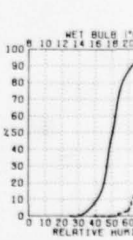












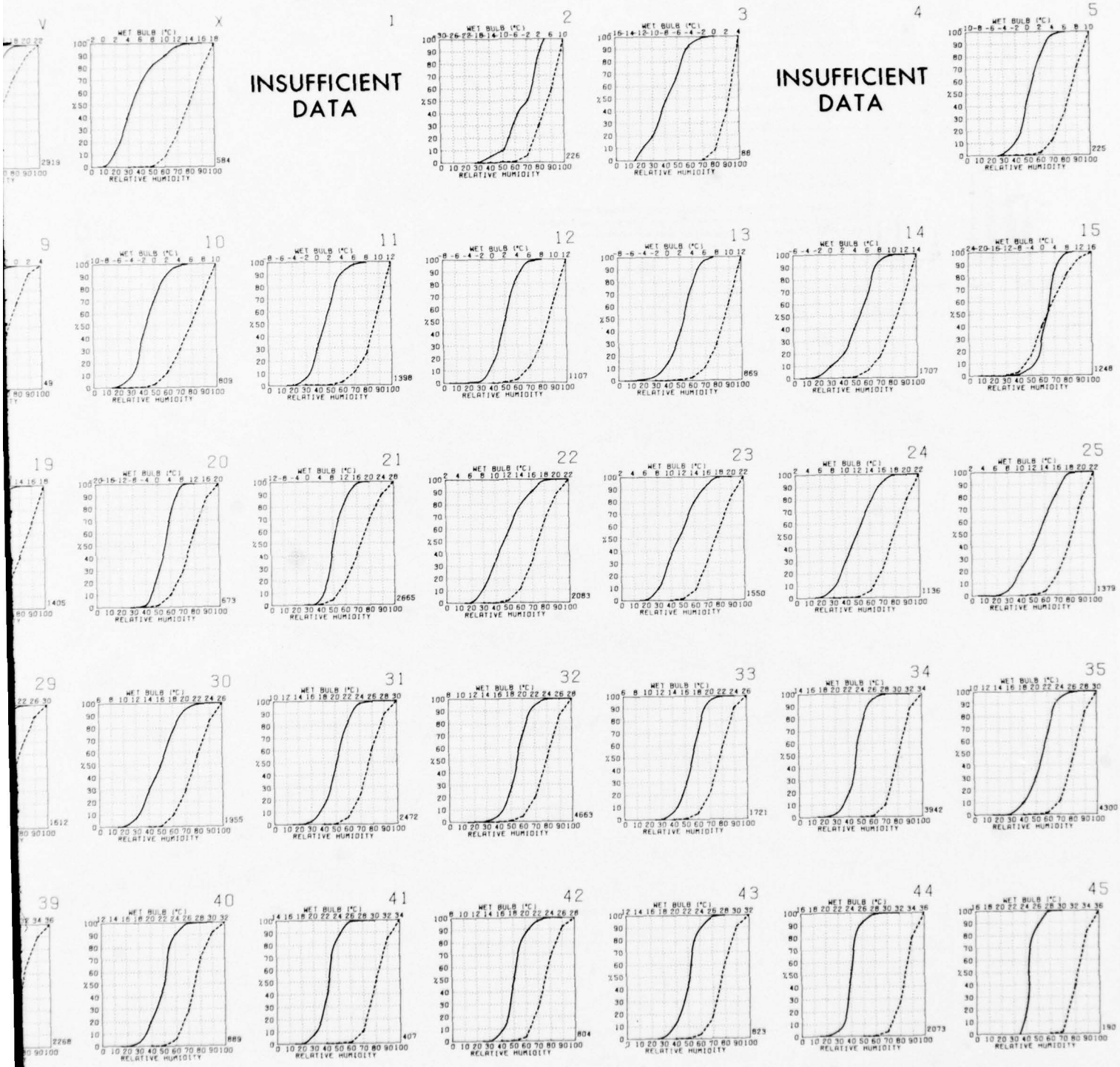
Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

IDITY

JANUARY

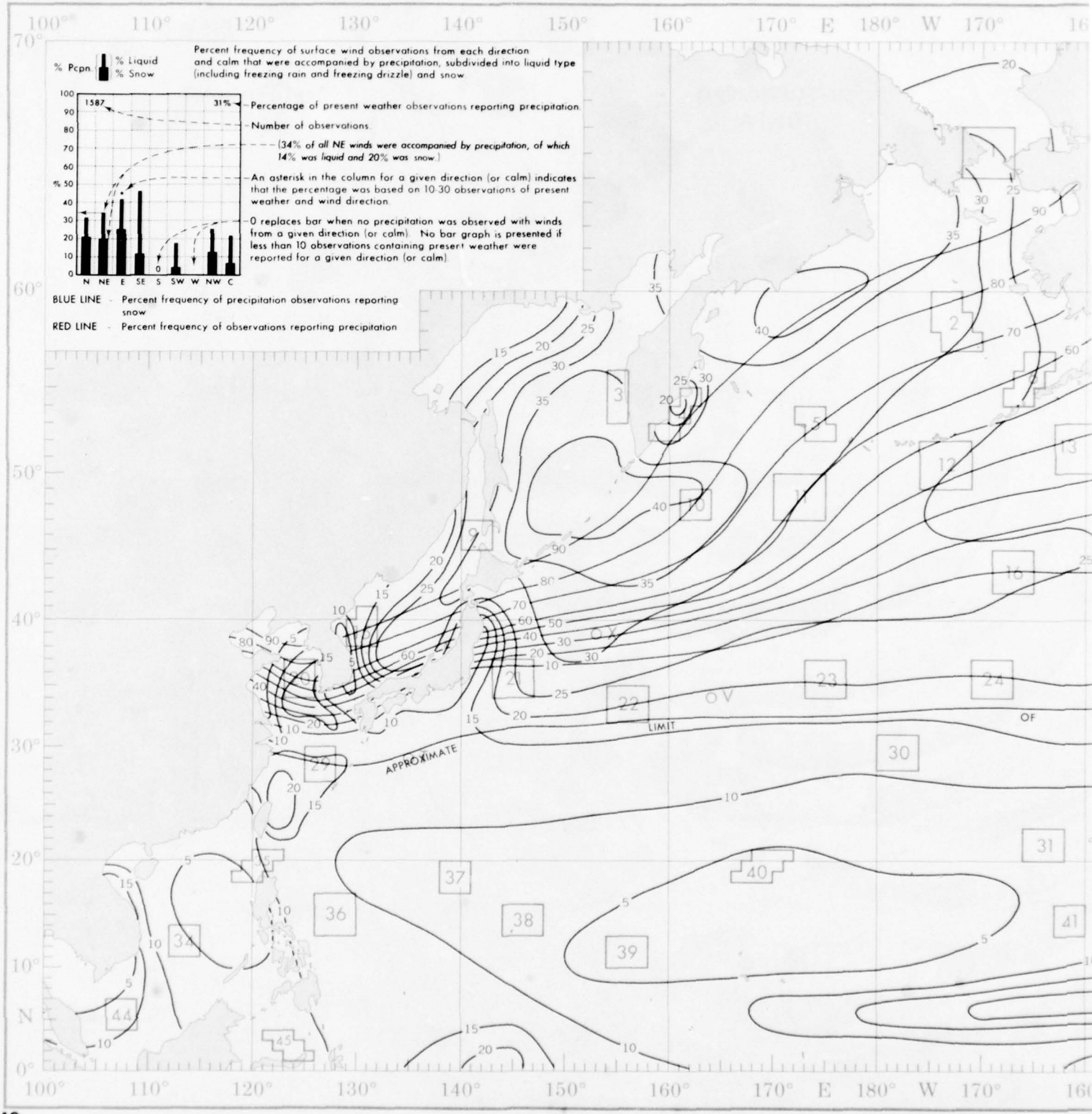
INSUFFICIENT DATA

INSUFFICIENT DATA

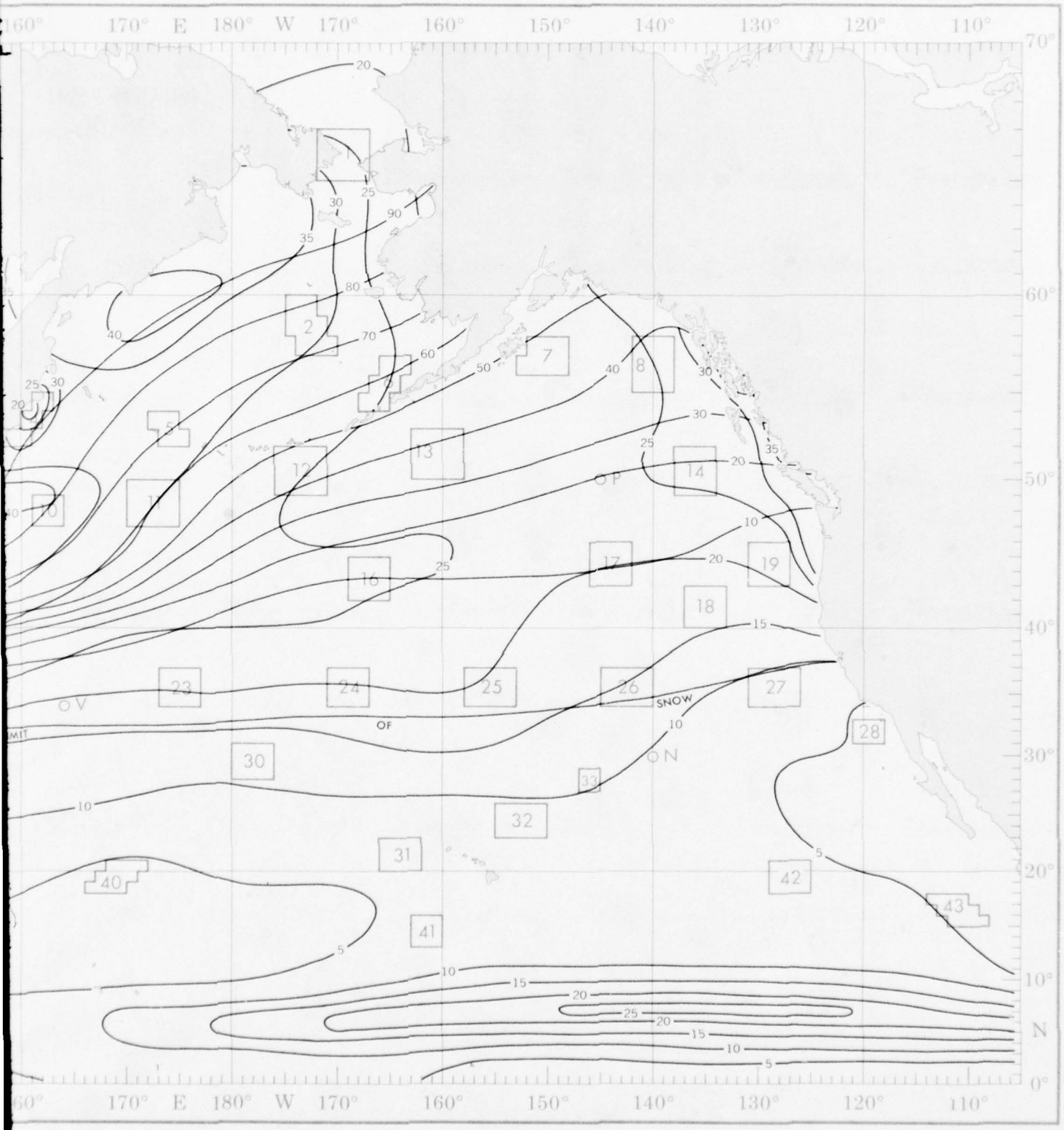


ective compilation of available data for specified areas without regard to suspected biases.
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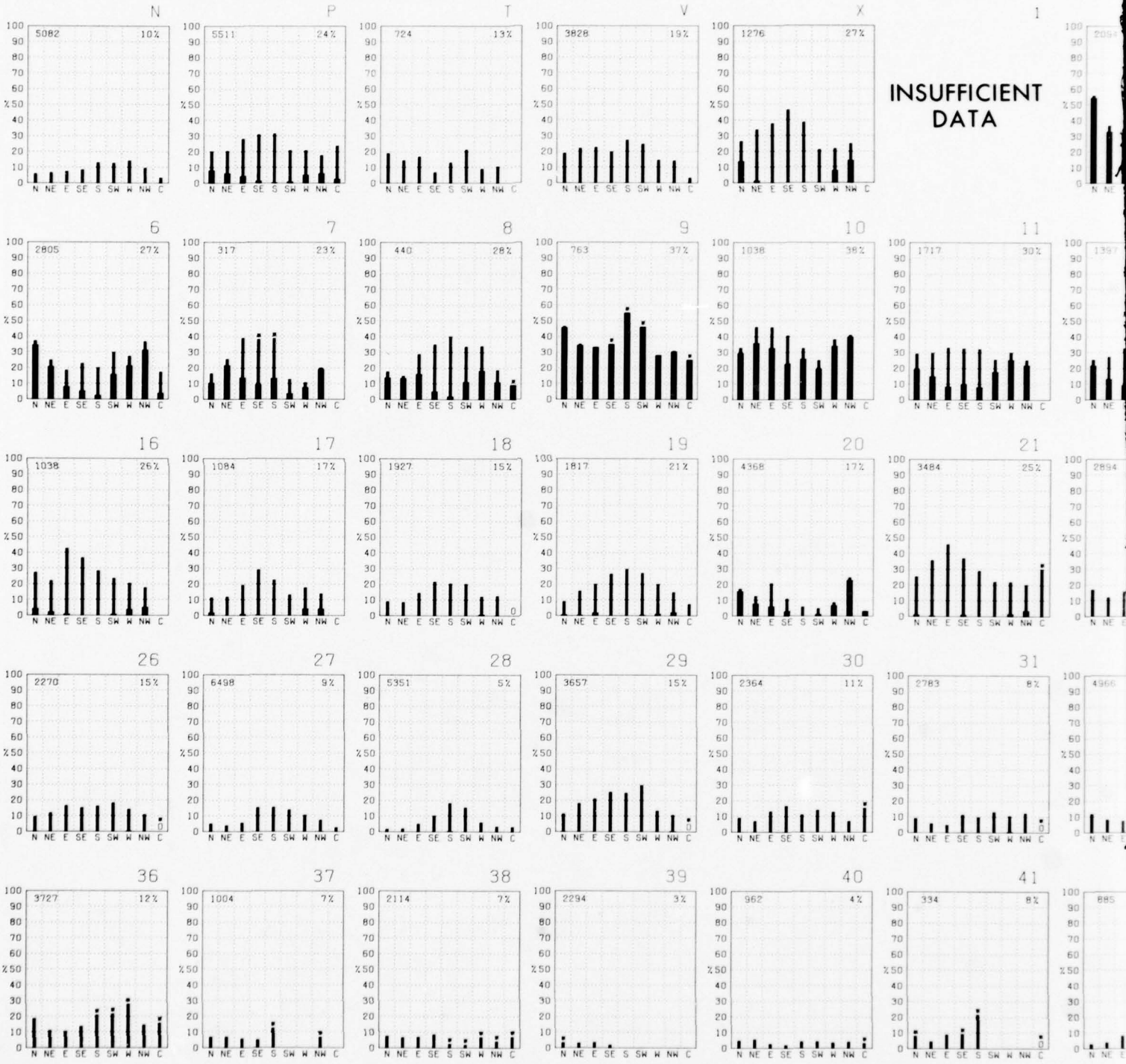
JANUARY


% Pcpn
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE
LIMIT
OF

PRECIPITATION

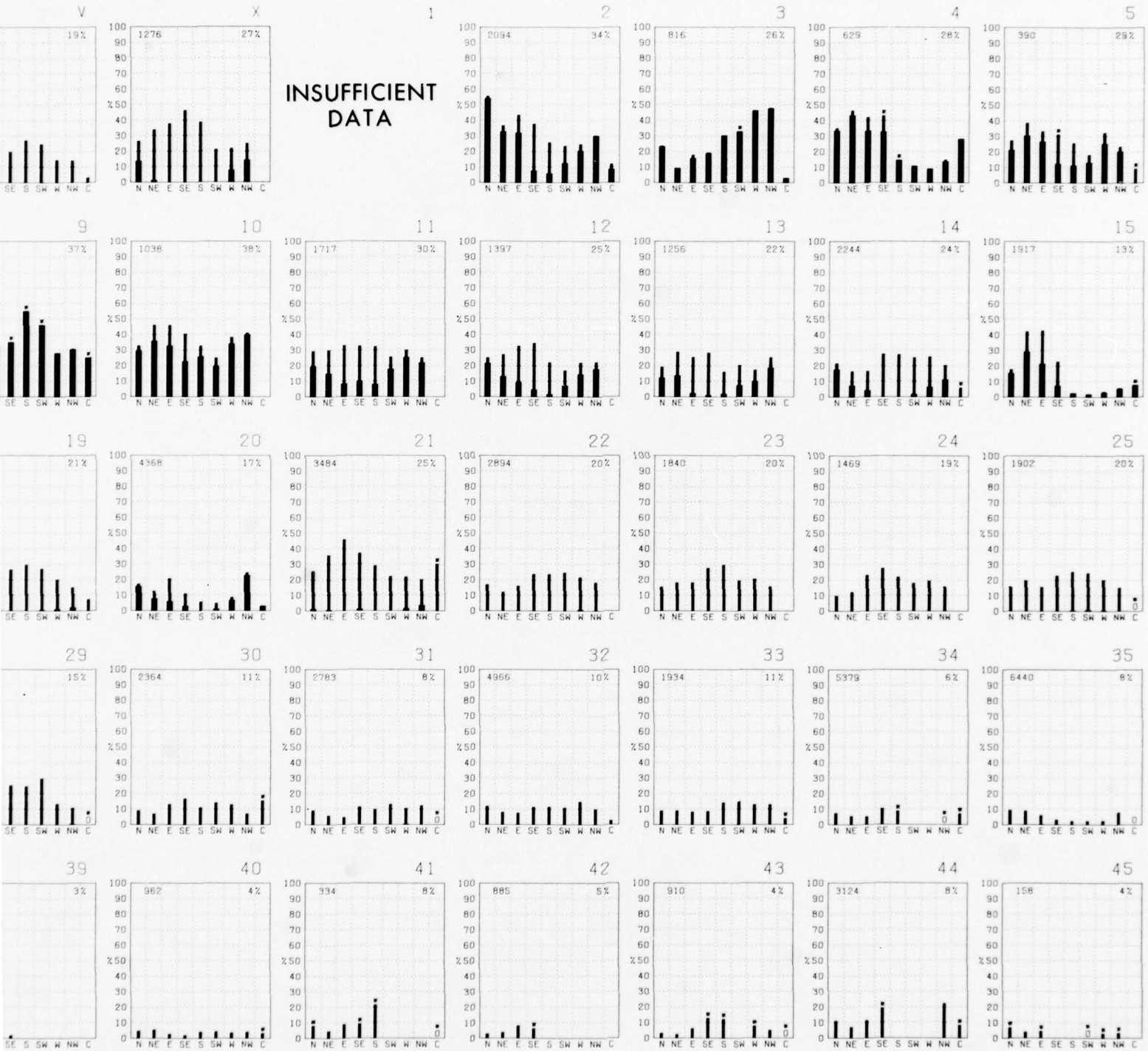


PRECIPITATION



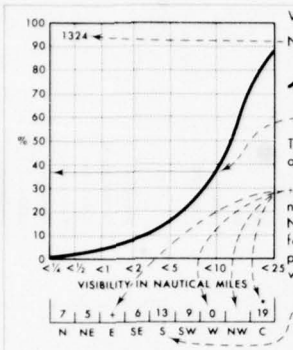
Graphs represent the objective compilation of available data for specified areas without rega
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JANUARY



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JANUARY



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(*37% of all visibilities reported were <10 nautical miles.*)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

+ indicates <.5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(*13% of all S winds were accompanied by visibilities <2 nautical miles.*)

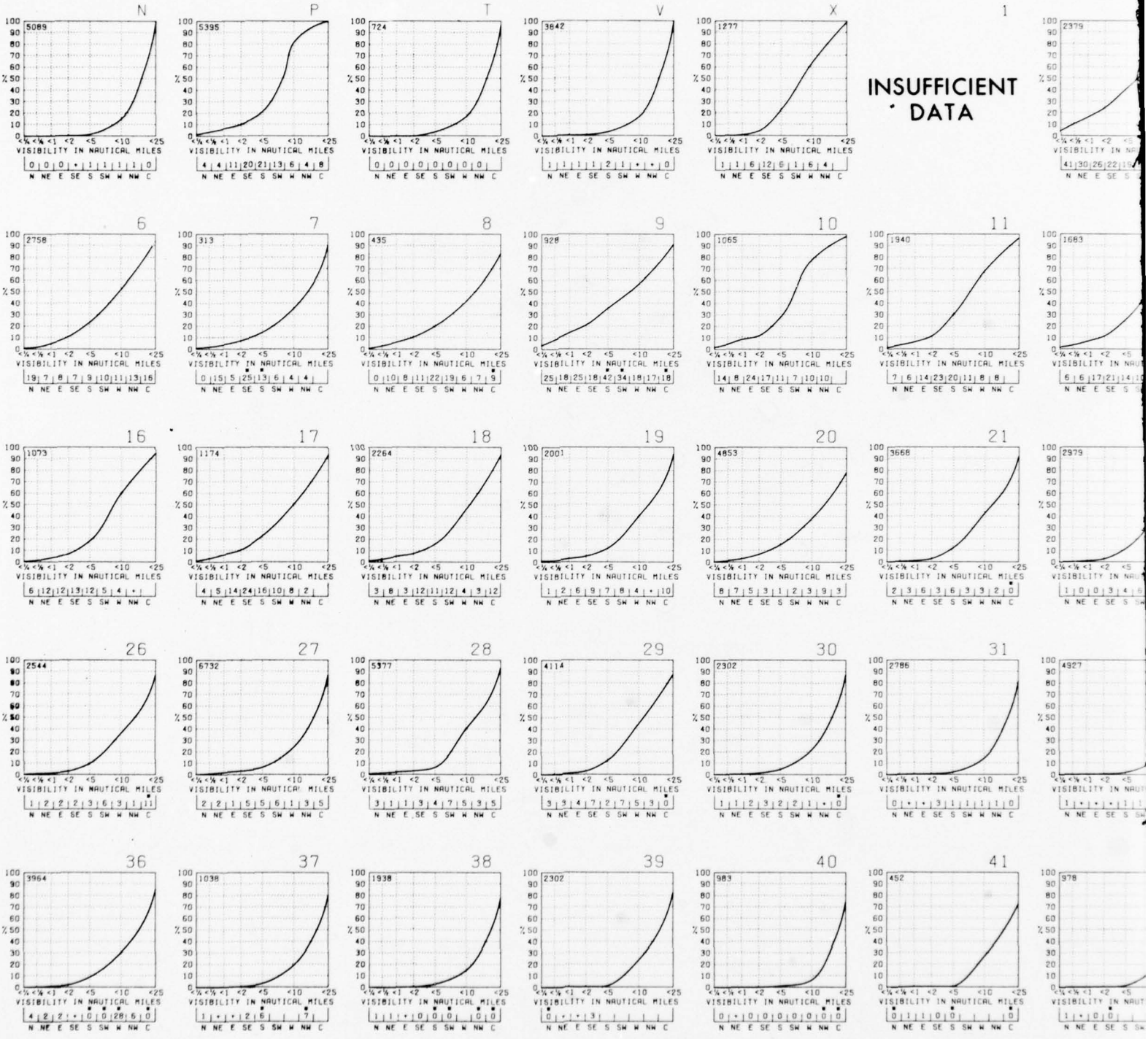
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles

VISIBILITY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1
2
4
5
6
7
8
10
11
12
13
14
16
17
18
19
23
24
25
26
27
28
30
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80
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95
5

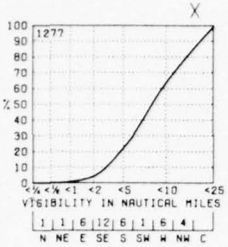
VISIBILITY



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JANUARY

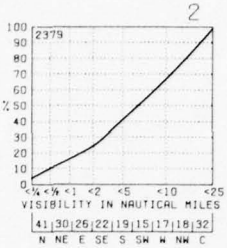
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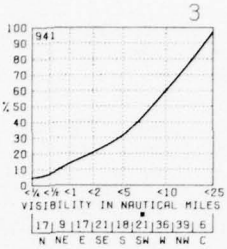
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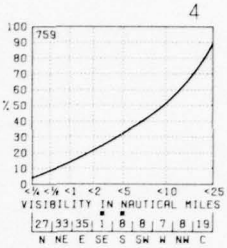
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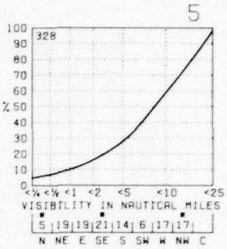
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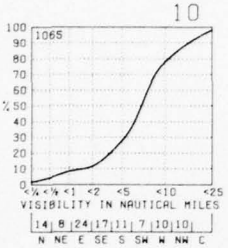
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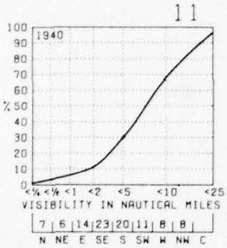
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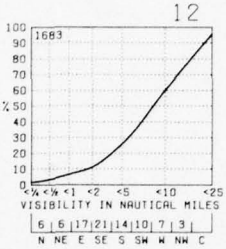
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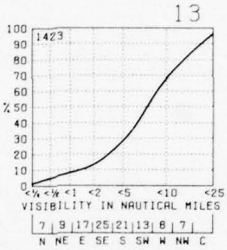
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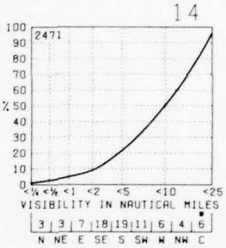
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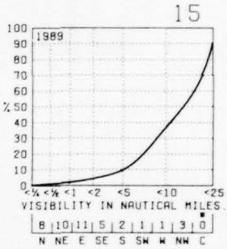
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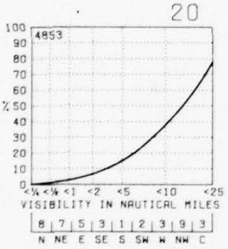
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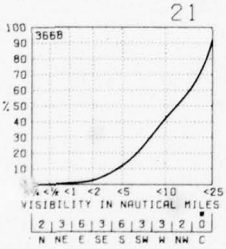
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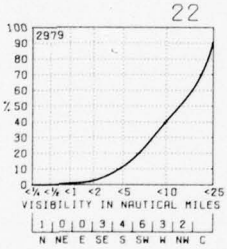
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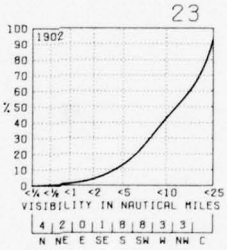
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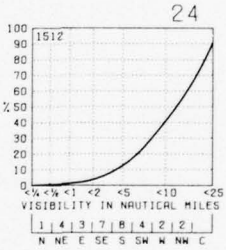
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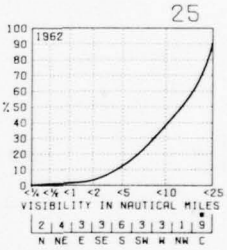
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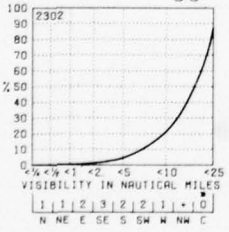
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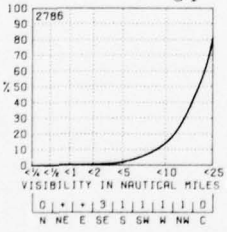
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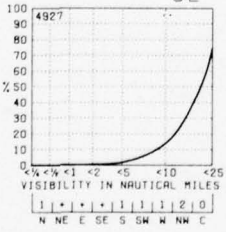
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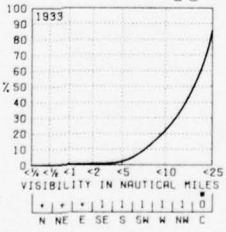
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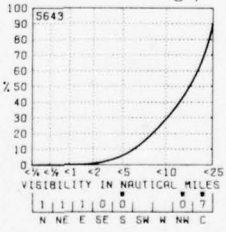
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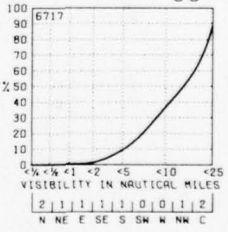
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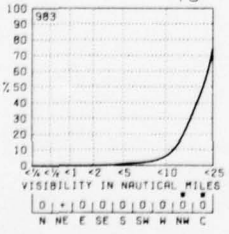
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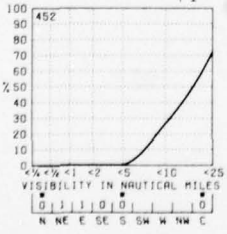
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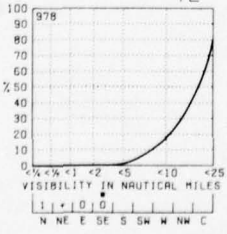
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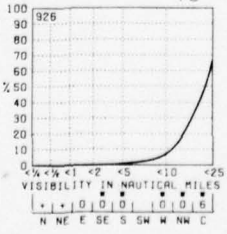
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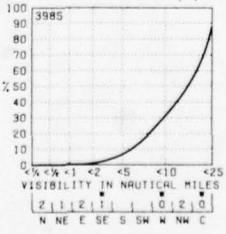
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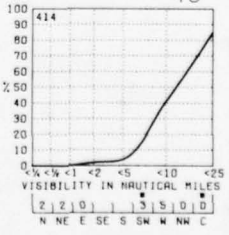
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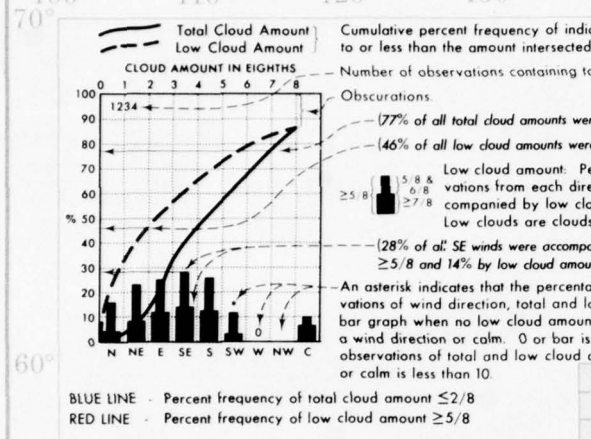


45



compilation of available data for specified areas without regard to suspected biases.
page) are based on all available data subjectively adjusted where bias was evident.

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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 | 5/8 & 6/8 | ≥7/8

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

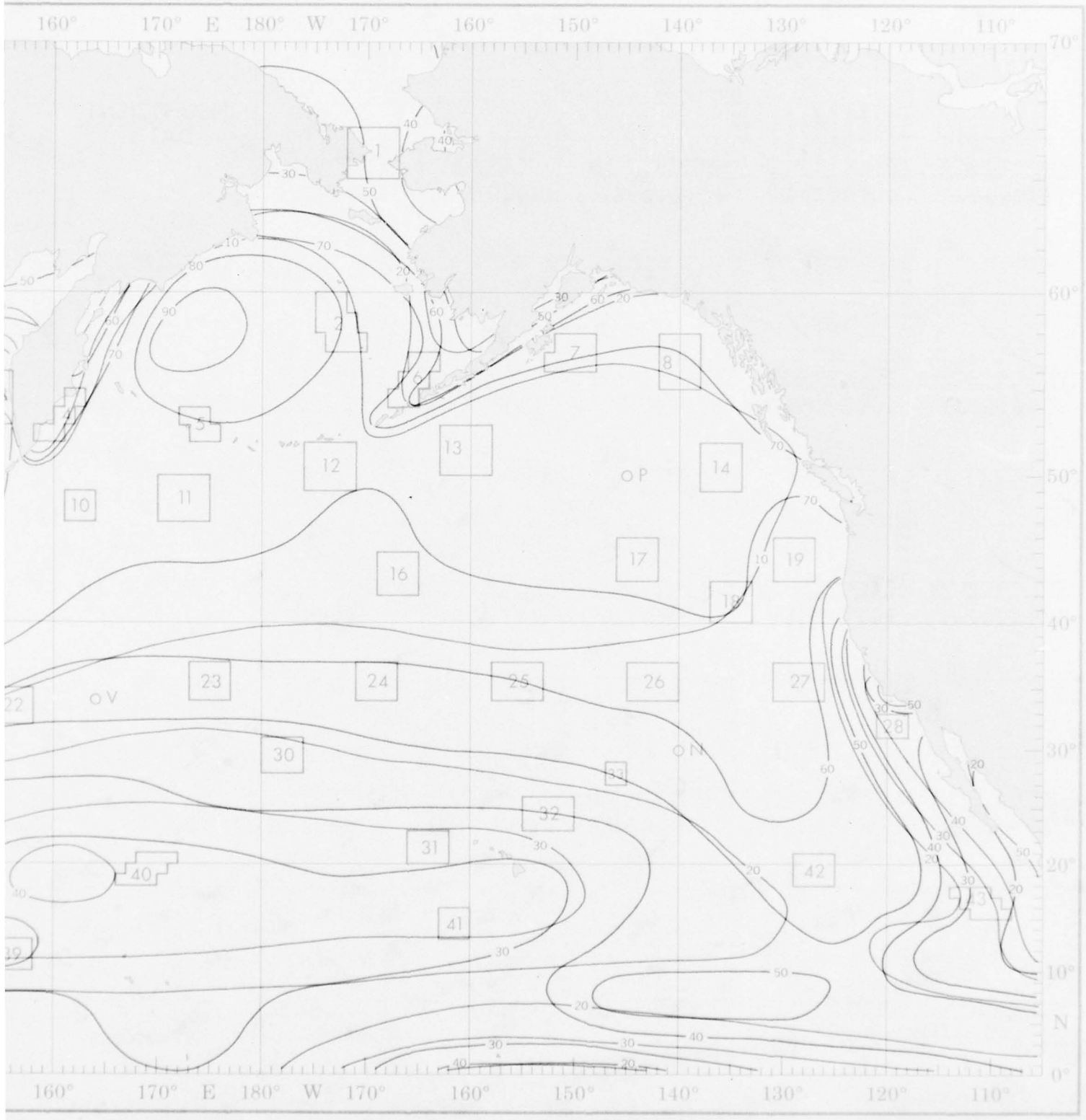
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

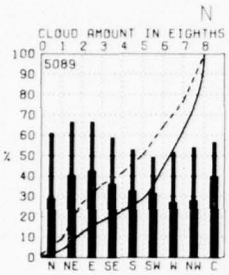
BLUE LINE - Percent frequency of total cloud amount ≤2/8

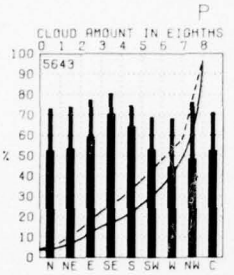
RED LINE - Percent frequency of low cloud amount ≥5/8

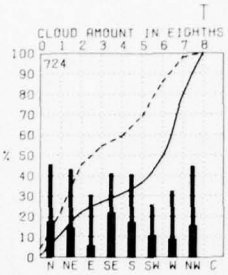
CLOUD COVER

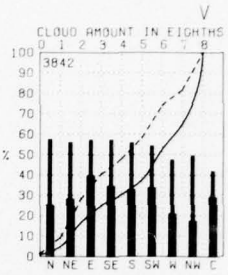

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° N 0°
OP
OV
ON
1
2
3
4
5
6
7
8
10
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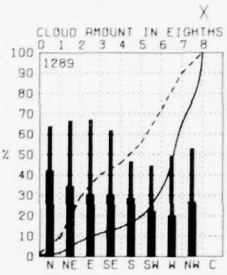
CLOUD COVER



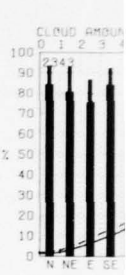


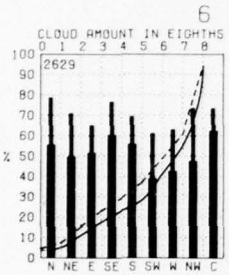


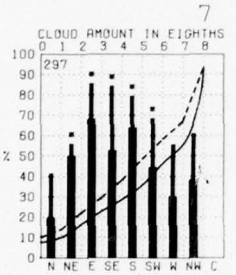


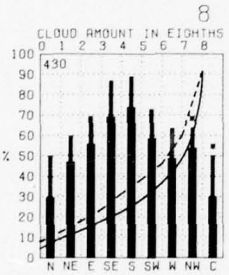


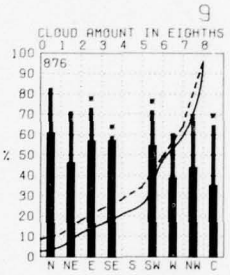
INSUFFICIENT DATA

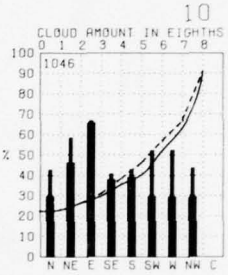


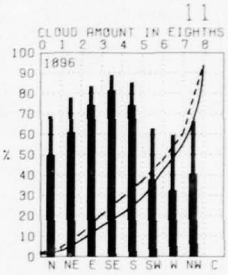


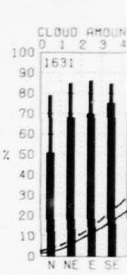


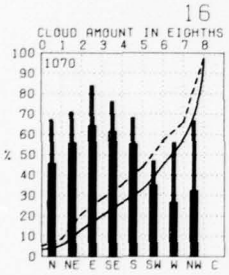


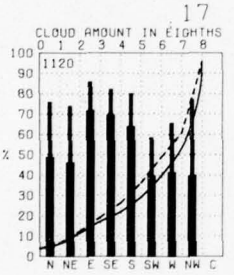


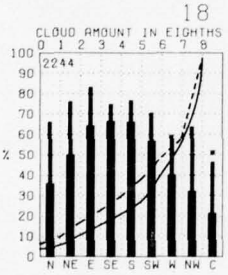


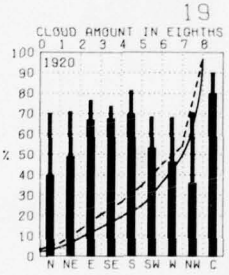


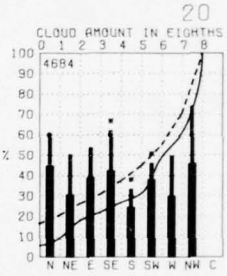


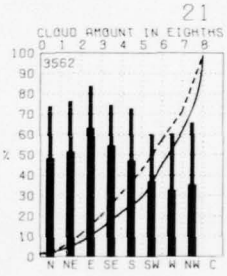


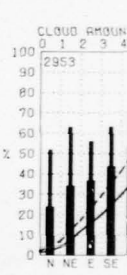


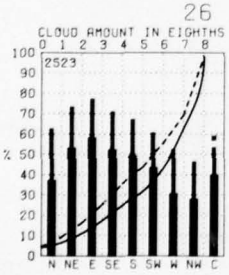


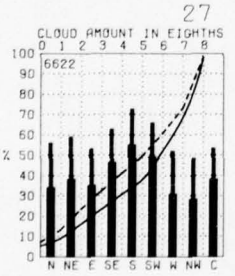


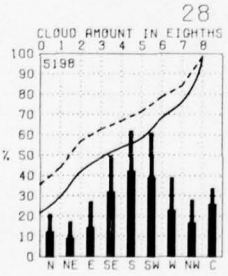


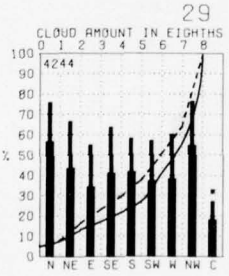


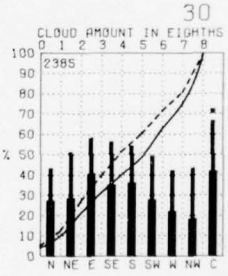


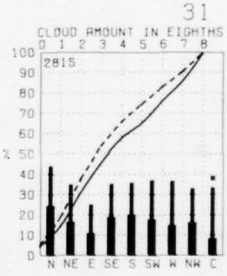


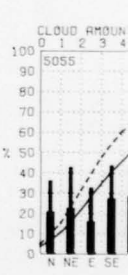


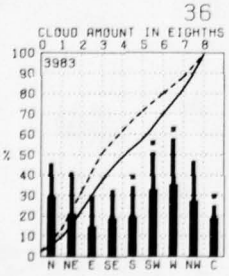


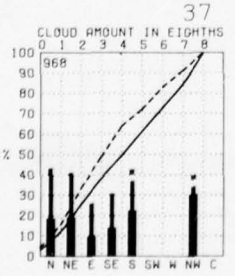


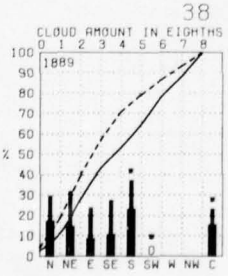


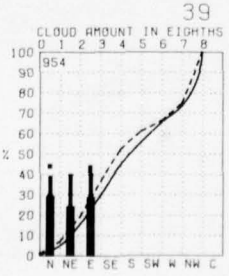


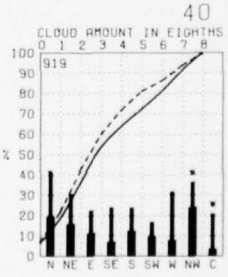


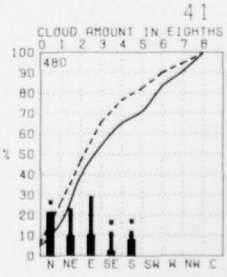


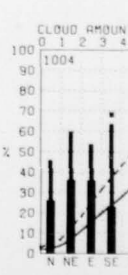






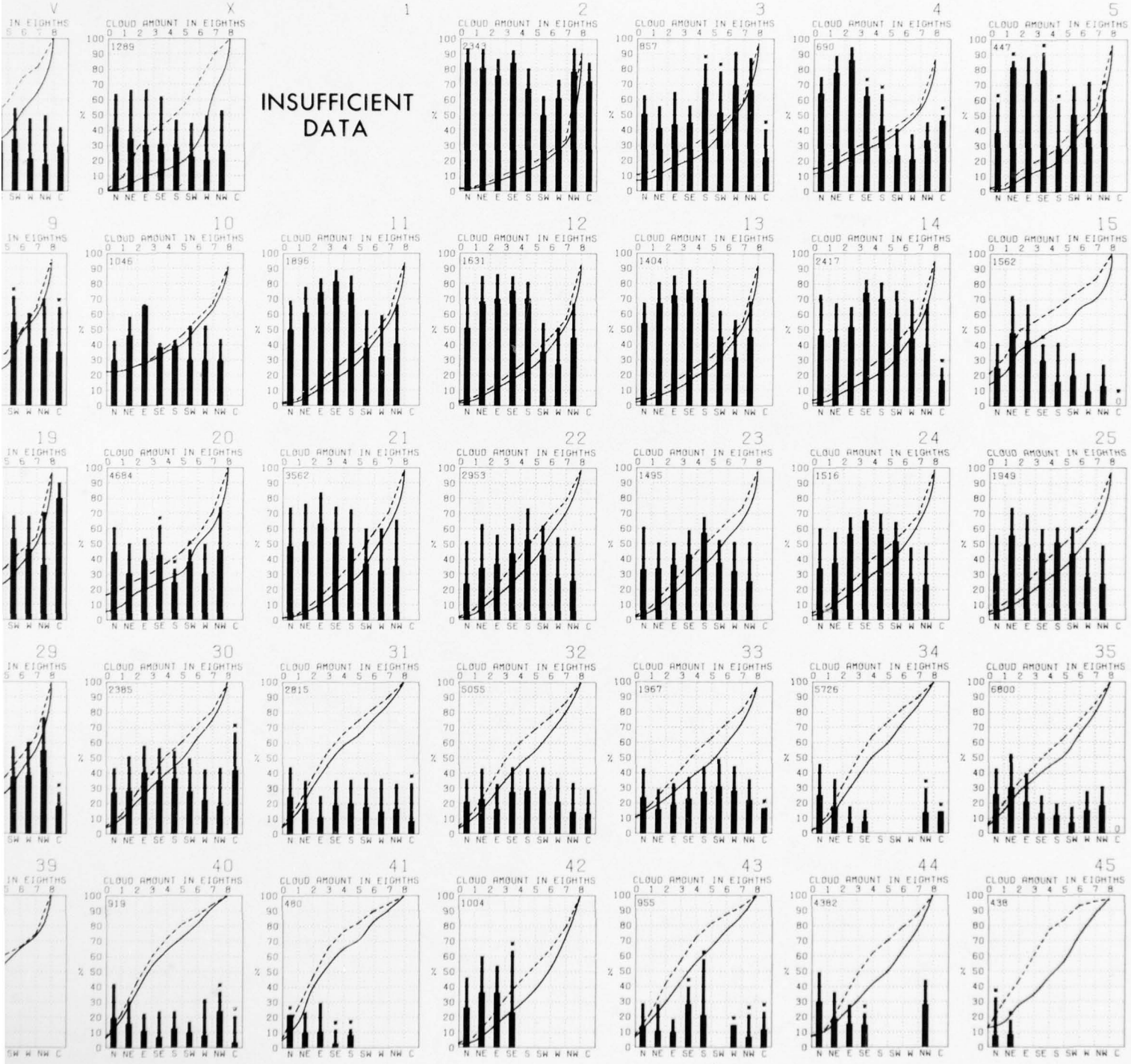






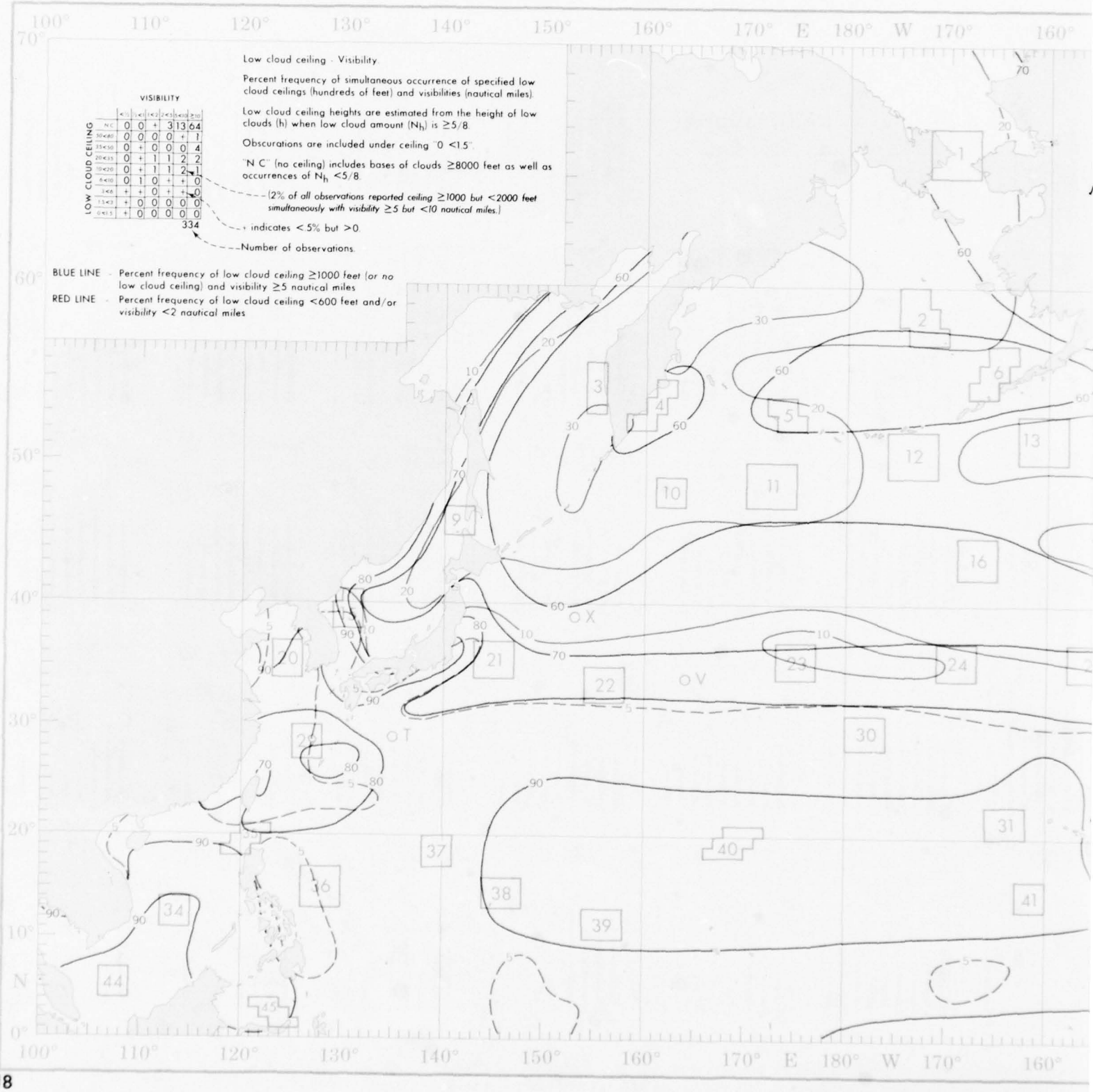
Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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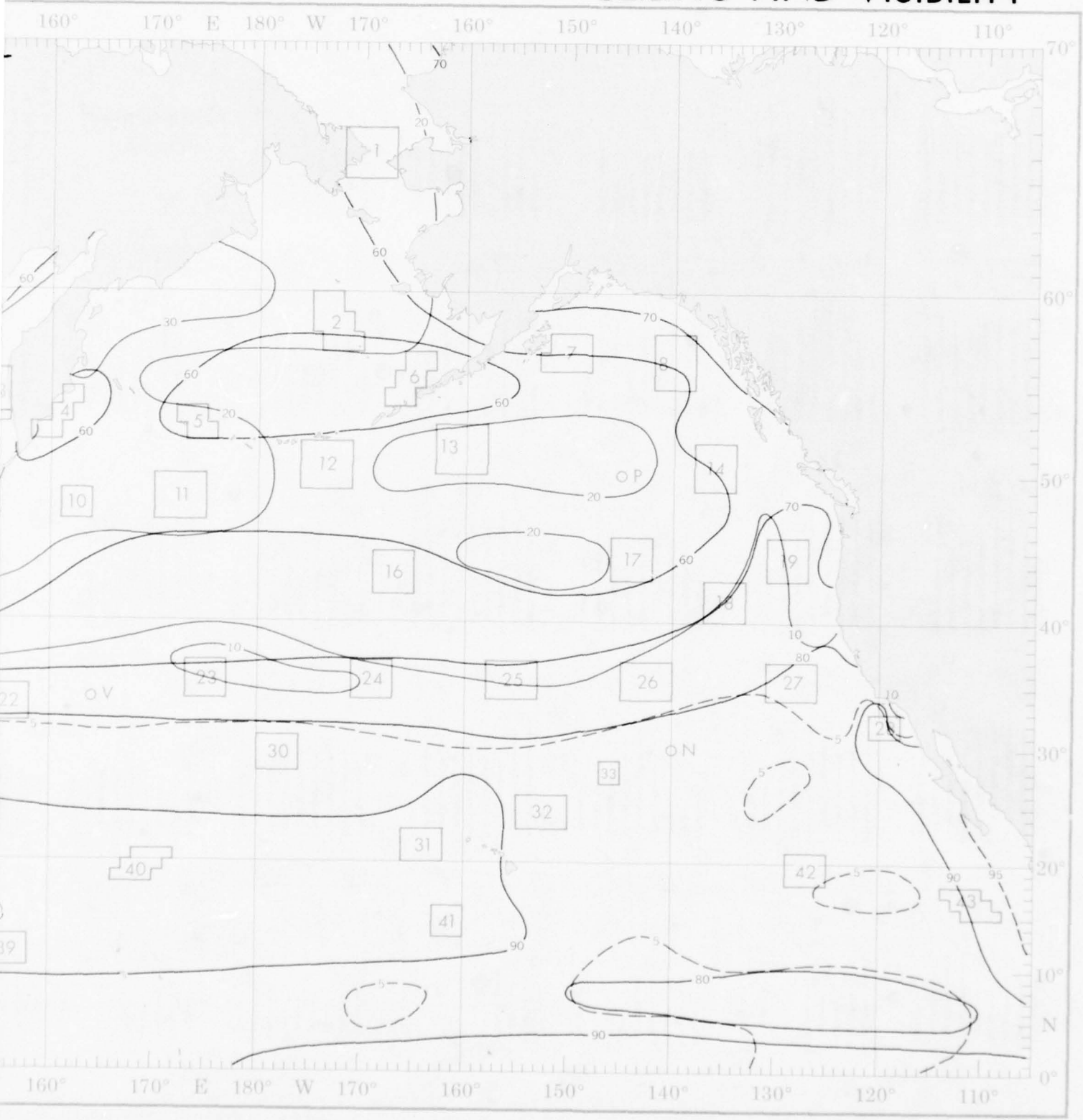


objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

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Low cloud ceiling - Visibility.
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
N C 0 0 + 3 13 64
50≤h<80 0 0 0 0 + 1
35≤h<50 0 + 0 0 0 4
20≤h<35 0 + 1 1 2 2
10≤h<20 0 + 1 1 2 1
6≤h<10 0 1 0 + + 0
3≤h<6 + + 0 + + 0
1.5≤h<3 + 0 0 0 0 0
0≤h<1.5 + 0 0 0 0 0
334
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0.
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	5	37
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	6
20<35	0	+	0	+	5	33
10<20	0	+	+	1	2	8
6<10	+	+	+	+	1	1
3<6	0	+	0	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	+	+	0	+	+

5089

P

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	19	7
50<80	+	0	0	+	+	+
35<50	0	0	0	+	1	+
20<35	+	+	+	1	15	6
10<20	+	+	1	4	22	4
6<10	+	1	1	3	3	1
3<6	1	1	1	2	1	+
1.5<3	+	+	+	+	+	+
0<1.5	2	+	+	0	+	+

5384

T

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	53
50<80	0	0	0	0	0	3
35<50	0	0	0	+	+	6
20<35	0	0	0	1	6	20
10<20	0	0	0	1	2	1
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

724

V

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	+	3	45
50<80	0	0	0	+	+	1
35<50	0	0	0	0	+	2
20<35	0	+	0	1	4	25
10<20	+	+	+	1	4	10
6<10	+	+	+	1	1	1
3<6	0	+	0	+	+	+
1.5<3	+	0	0	+	0	0
0<1.5	+	0	0	0	0	0

3841

X

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	C	+	2	8	18	18
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	3
20<35	+	+	+	4	13	12
10<20	0	+	1	4	9	3
6<10	0	0	+	1	1	+
3<6	0	0	+	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

1276

INSUFFICIENT DATA

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+					
50<80	0					
35<50	0					
20<35	2					
10<20	1					
6<10	1					
3<6	1					
1.5<3	0					
0<1.5	7					

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	7	23
50<80	0	0	0	+	1	2
35<50	+	0	+	+	1	2
20<35	+	+	+	2	5	9
10<20	+	1	3	6	10	11
6<10	+	+	1	2	3	1
3<6	+	+	+	+	+	+
1.5<3	+	+	0	+	+	+
0<1.5	1	1	2	1	1	+

2263

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	2	34
50<80	0	0	0	0	+	+
35<50	0	0	0	0	0	2
20<35	0	0	0	+	2	6
10<20	+	0	+	2	5	15
6<10	0	0	+	1	6	9
3<6	0	0	0	1	2	1
1.5<3	0	+	+	1	0	0
0<1.5	2	1	1	1	+	0

232

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	29
50<80	+	0	0	0	1	1
35<50	0	0	0	0	1	2
20<35	0	1	0	1	2	5
10<20	0	0	+	1	6	16
6<10	0	+	+	1	4	8
3<6	0	0	1	2	2	3
1.5<3	0	0	0	+	1	+
0<1.5	3	2	2	2	1	0

325

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	0	2	5	24
50<80	0	0	0	0	1	+
35<50	+	+	1	+	2	5
20<35	1	2	1	4	8	12
10<20	1	1	1	4	4	8
6<10	+	+	1	1	1	+
3<6	+	0	0	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	1	1	2	1	2	+

413

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	12	8
50<80	0	0	0	+	+	0
35<50	0	0	0	0	1	1
20<35	+	1	+	1	13	7
10<20	+	1	1	8	21	4
6<10	+	1	1	4	3	1
3<6	+	1	1	1	1	+
1.5<3	0	0	+	0	+	+
0<1.5	3	1	1	+	0	+

942

11

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	3	9	17
50<80	0	0	0	0	0	+
35<50	0	0	0	+	1	1
20<35	0	+	+	1	2	3
10<20	+	+	1	5	12	7
6<10	1	1	2	6	6	5
3<6	+	+	1	2	2	1
1.5<3	+	+	+	+	+	0
0<1.5	3	1	1	2	1	+

1285

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	0	1	14	21
50<80	0	0	0	0	+	0
35<50	0	0	+	0	1	+
20<35	0	0	0	1	10	5
10<20	+	+	1	4	10	9
6<10	+	1	+	2	5	4
3<6	+	1	+	2	2	1
1.5<3	0	0	+	+	+	+
0<1.5	1	+	1	+	1	+

860

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	5	21
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	+	+	0	1	3	7
10<20	+	1	+	3	8	14
6<10	+	1	1	2	6	9
3<6	+	+	+	2	2	1
1.5<3	+	0	0	+	+	+
0<1.5	2	1	1	1	1	+

743

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	4	25
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	1
20<35	0	+	+	+	8	16
10<20	0	+	0	+	3	7
6<10	+	+	+	2	4	4
3<6	+	+	+	1	1	1
1.5<3	+	0	+	+	+	+
0<1.5	1	+	1	1	+	+

1556

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	+	4	23
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	1
20<35	0	0	0	1	4	16
10<20	0	+	+	2	9	19
6<10	0	0	+	1	4	5
3<6	0	+	1	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	1	+	1	1	+	+

1581

20

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	8	29
50<80	+	0	+	2	4	2
35<50	0	0	+	1	3	5
20<35	0	0	0	1	7	13
10<20	0	0	+	1	5	5
6<10	0	0	+	2	3	2
3<6	0	0	+	1	1	2
1.5<3	+	+	0	0	0	0
0<1.5	0	+	0	+	+	0

570

21

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	5	25
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	+	1	4	10
10<20	+	+	+	3	8	15
6<10	+	+	1	2	6	8
3<6	+	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	1	1	+

2684

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	5	31
50<80	0	0	0	0	+	1
35<50	0	0	+	0	+	2
20<35	0	0	+	1	2	8
10<20	+	+	+	2	6	18
6<10	0	+	+	2	5	8
3<6	0	0	+	1	1	1
1.5<3	0	0	0	+	+	+
0<1.5	1	+	+	1	1	+

1778

27

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	3	38
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	2
20<35	+	0	+	+	2	12
10<20	+	+	+	1	4	19
6<10	+	+	+	+	3	8
3<6	+	+	+	+	1	2
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	+

5093

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	24	45
50<80	0	0	0	+	1	1
35<50	0	0	0	0	1	1
20<35	0	0	+	+	4	5
10<20	0	0	+	+	5	6
6<10	0	+	+	1	2	1
3<6	+	+	+	+	+	+
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	+	+	0

4566

29

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	24
50<80	0	0	0	0	+	1
35<50	0	0	0	+	1	2
20<35	0	0	0	1	4	9
10<20	+	+	+	3	10	16
6<10	0	+	+	3	7	7
3<6	0	+	+	+	1	1
1.5<3	0	0	+	+	+	+
0<1.5	+	+	+	1	1	+

2030

30

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	48
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	0	0	0	+	2	9
10<20	0	0	+	+	4	14
6<10	0	0	+	1	3	7
3<6	0	0	+	+	1	1
1.5<3	0	0	+	+	+	0
0<1.5	+	+	+	+	+	+

1619

31

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	5	62
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	1
20<35	0	0	+	+	2	7
10<20	0	+	0	+	3	11
6<10	0	0	+	+	2	5
3<6	0	0	0	+	1	1
1.5<3	0	0	+	+	+	+
0<1.5	+	0	0	+	+	+

2236

36

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	10	52
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	+
20<35	0	0	+	1	2	4
10<20	0	+	+	2	7	8
6<10	+	+	+	1	3	4
3<6	+	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	+

3246

37

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	59
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	+	2	4
10<20	0	0	0	1	3	12
6<10	0	+	+	1	2	5
3<6	0	+	0	+	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	+	+	0	+

747

38

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	66
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	4
10<20	0	0	0	+	3	10
6<10	0	0	0	+	2	4
3<6	0	0	0	+	1	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	+	0	+

1143

39

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	80
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	+
20<35	0	0	0	0	1	13
10<20	0	0	0	0	+	2
6<10	0	0	0	0	+	1
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

727

40

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	70
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	2
20<35	0	0	0	+	+	6
10<20	0	0	0	0	1	11
6<10	0	0	0	+	1	4
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	+	0	+	+

751

41

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	6	71
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	3
10<20	0	0	0	0	2	9
6<10	0	0	0	0	0	4
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

295

Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

JANUARY

INSUFFICIENT DATA

1

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	2	8	18	18
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	3
20<35	*	*	*	4	13	12
10<20	0	*	1	4	9	3
6<10	0	0	*	1	1	*
3<6	0	0	*	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

1276

2

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	3	12
50<80	0	0	*	*	1	1
35<50	0	*	*	*	2	2
20<35	2	2	2	6	10	12
10<20	1	2	2	5	7	6
6<10	1	*	1	2	2	1
3<6	1	*	1	*	*	*
1.5<3	0	0	0	*	*	*
0<1.5	7	1	1	1	1	*

2095

3

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	1	2	11	21
50<80	*	0	*	*	3	2
35<50	0	*	0	*	1	2
20<35	1	1	2	3	6	12
10<20	3	5	3	3	4	4
6<10	1	1	1	*	1	*
3<6	*	*	*	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	1	1	1	1	*	*

701

4

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	0	0	5	32
50<80	0	0	*	0	1	1
35<50	*	*	*	1	2	3
20<35	1	1	1	2	4	10
10<20	*	2	1	2	4	4
6<10	1	0	0	1	*	1
3<6	1	0	1	0	1	*
1.5<3	1	*	1	1	*	*
0<1.5	5	2	4	3	1	0

593

5

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	1	7	19
50<80	0	0	0	*	*	1
35<50	*	0	*	1	4	2
20<35	1	*	1	3	5	9
10<20	1	1	2	3	6	10
6<10	1	*	1	2	6	1
3<6	0	0	0	*	1	1
1.5<3	0	0	0	*	1	*
0<1.5	2	1	1	1	0	*

272

V

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
	*	*	3	45		
	0	*	2			
	1	4	25			
	1	4	10			
	1	1	1			
	*	*	*			
	*	0	0			
	0	0	0			

3841

X

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	2	8	18	18
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	3
20<35	*	*	*	4	13	12
10<20	0	*	1	4	9	3
6<10	0	0	*	1	1	*
3<6	0	0	*	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

1276

9

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
	2	5	24			
	0	1	*			
	*	2	5			
	4	8	12			
	4	4	8			
	1	1	*			
	*	*	*			
	*	0	0			
	1	2	*			

413

10

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	12	8
50<80	0	0	0	*	*	0
35<50	0	0	0	0	1	1
20<35	*	1	*	1	13	7
10<20	*	1	1	8	21	4
6<10	*	1	1	4	3	1
3<6	*	1	1	1	1	*
1.5<3	0	0	*	0	*	*
0<1.5	3	1	1	*	0	*

942

11

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	3	9	17
50<80	0	0	0	0	0	*
35<50	0	0	0	*	1	1
20<35	0	*	*	1	2	3
10<20	*	*	1	5	12	7
6<10	1	1	2	6	6	5
3<6	*	*	1	2	2	1
1.5<3	*	*	*	*	*	0
0<1.5	3	1	1	2	1	*

1285

12

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	2	7	17
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	1
20<35	*	*	0	1	3	5
10<20	*	*	*	4	9	11
6<10	*	*	1	5	8	6
3<6	*	*	1	1	2	1
1.5<3	*	*	*	*	0	*
0<1.5	3	2	2	2	2	*

1125

13

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	9	17
50<80	0	0	0	*	0	*
35<50	0	0	0	*	1	1
20<35	*	*	*	1	4	4
10<20	*	*	1	5	10	8
6<10	*	*	1	4	8	5
3<6	*	*	1	2	3	1
1.5<3	0	*	*	*	*	*
0<1.5	5	1	1	2	1	0

974

14

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	2	5	20
50<80	0	0	*	0	0	1
35<50	0	0	0	*	*	1
20<35	0	*	*	1	3	15
10<20	*	*	*	3	9	12
6<10	*	*	1	3	6	4
3<6	*	*	*	1	2	1
1.5<3	*	*	*	*	*	*
0<1.5	2	1	1	1	1	*

1886

15

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	25	41
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	2
20<35	0	0	*	*	7	5
10<20	*	*	1	3	8	2
6<10	*	*	1	1	1	0
3<6	0	*	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	*	*	*	0	*	0

748

19

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
	*	4	23			
	*	*	1			
	*	*	1			
	1	4	16			
	2	9	19			
	1	4	5			
	1	1	1			
	*	*	*			
	1	1	*			

1581

20

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	8	29
50<80	*	0	*	2	4	2
35<50	0	0	*	1	3	5
20<35	0	0	0	1	7	13
10<20	0	0	*	1	5	5
6<10	0	0	*	2	3	2
3<6	0	0	*	1	1	2
1.5<3	*	*	0	0	0	0
0<1.5	0	*	0	*	*	0

570

21

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	5	25
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	2
20<35	0	0	*	1	4	10
10<20	*	*	*	3	8	15
6<10	*	*	1	2	6	8
3<6	*	*	*	1	1	1
1.5<3	0	*	*	*	*	*
0<1.5	*	*	*	1	1	*

2684

22

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	7	34
50<80	0	0	0	*	*	*
35<50	0	0	0	*	1	2
20<35	*	*	*	1	4	8
10<20	*	*	*	2	7	13
6<10	0	0	*	2	5	6
3<6	0	*	*	1	1	1
1.5<3	0	0	0	0	*	*
0<1.5	*	*	*	*	*	*

2272

23

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	9	35
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	2
20<35	*	*	0	*	3	6
10<20	0	0	*	3	8	11
6<10	0	0	*	3	6	6
3<6	0	*	*	1	1	1
1.5<3	*	0	*	0	*	0
0<1.5	*	*	1	1	1	*

1174

24

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	7	34
50<80	0	0	0	*	*	1
35<50	0	0	0	0	*	2
20<35	0	0	*	1	2	6
10<20	0	0	*	2	9	11
6<10	0	0	*	2	7	6
3<6	0	*	*	1	1	2
1.5<3	0	0	0	*	1	*
0<1.5	1	*	1	1	*	*

1160

25

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	6	36
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	2
20<35	*	*	0	*	2	6
10<20	*	*	*	2	6	12
6<10	*	0	*	1	5	8
3<6	*	0	*	1	2	1
1.5<3	*	0	0	*	*	*
0<1.5	1	*	1	1	1	*

1483

29

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
	1	5	24			
	0	*	1			
	*	1	2			
	1	4	9			
	3	10	16			
	1	7	7			
	*	1	1			
	*	*	*			
	1	1	*			

2030

30

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	48
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	3
20<35	0	0	0	*	2	9
10<20	0	0	*	*	4	14
6<10	0	0	*	1	3	7
3<6	0	0	*	*	1	1
1.5<3	0	0	*	*	*	0
0<1.5	*	*	*	*	*	*

1619

31

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	5	62
50<80	0	0	0	*	*	1
35<50	0	0	0	*	*	1
20<35	0	0	*	*	2	7
10<20	0	0	*	0	*	3
6<10	0	0	*	*	2	5
3<6	0	0	0	*	1	1
1.5<3	0	0	*	*	*	*
0<1.5	*	0	0	*	*	*

2236

32

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	3	58
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	2
20<35	*	0	0	*	1	7
10<20	0	*	*	*	2	13
6<10	0	0	0	*	2	7
3<6	0	0	*	*	1	1
1.5<3	*	*	*	*	*	*
0<1.5	*	*	*	*	*	*

3972

33

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	7	45
50<80	0	0	0	0	*	1
35<50	0	0	0	0	1	3
20<35	0	0	*	*	7	13
10<20	*	*	0	1	3	11
6<10	*	*	0	*	2	4
3<6	*	*	0	*	1	1
1.5<3	0	0	0	0	*	*
0<1.5	0	*	*	*	0	*

1707

34

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	10	53
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	0	0	0	*	2	4
10<20	*	0	*	2	6	9
6<10	*	*	*	1	3	3
3<6	*	*	*	*	1	*
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

4853

35

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	2	11	43
50<80	0	0	0	*	*	*
35<50	0	0	0	*	1	1
20<35	0	0	*	1	3	5
10<20	*	*	*	3	8	9
6<10	0	*	*	2	5	3
3<6	*	*	*	1	1	*
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

5492

39

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
	*	2	80			
	0	0	0			
	0	0	*			
	0	1	13			
	0	*	2			
	0	*	1			
	0	0	*			
	0	0	0			

727

40

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	70
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	2
20<35	0	0	0	*	*	6
10<20	0	0	0	0	1	11
6<10	0	0	0	*	1	4
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	*
0<1.5	0	0	*	0	*	*

751

41

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	6	71
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	3
10<20	0	0	0	0	2	9
6<10	0	0	0	0	0	4
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	*
0<1.5	0	0	0	0	0	0

295

42

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	41
50<80	0	0	0	0	0	1
35<50	0	0	0	0	*	3
20<35	0	0	0	*	2	8
10<20	0	0	*	*	2	21
6<10	0	0	0	1	2	14
3<6	0	0	0	0	1	1
1.5<3	0	0	0	0	*	0
0<1.5	0	0	*	0	1	*

782

43

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	71
50<80	0	0	0	0	0	1
35<50	0	0	0	0	*	2
20<35	*	0	0	*	1	5
10<20	0	0	0	*	1	9
6<10	0	0	0	*	*	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	*	*	*
0<1.5	0	0	0	0	0	*

796

44

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	10	51
50<80	0	0	0	*	0	1
35<50	0	0	0	*	*	1
20<35	0	0	0	1	2	4
10<20	0	*	*	2	6	9
6<10	*	0	0	2	4	3
3<6	*	*	*	*	1	1
1.5<3	0	0	*	*	0	*
0<1.5	*	*	*	*	*	0

2228

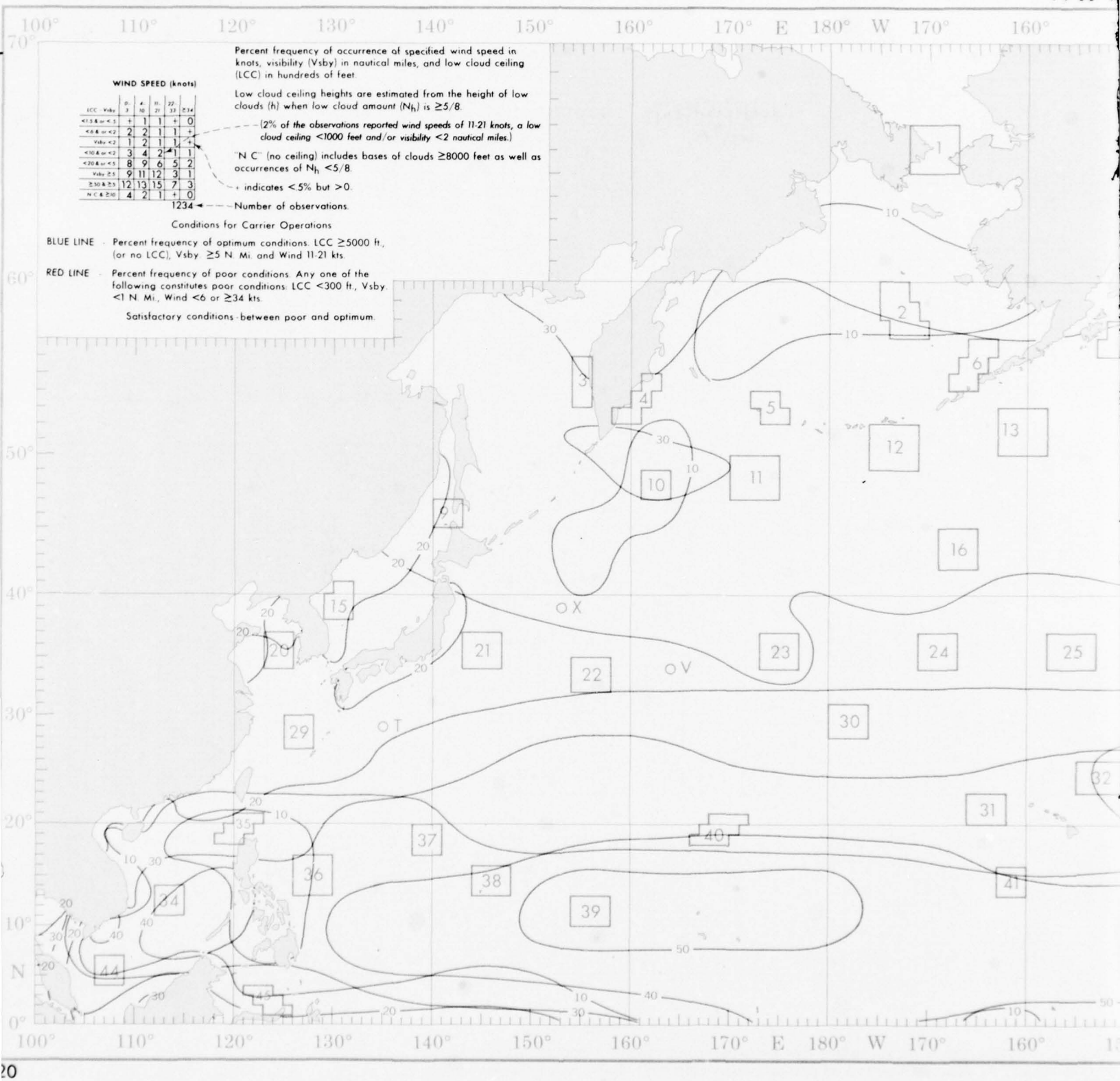
45

LOW CLOUD CEILING	VISIBILITY					
	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	82
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	2	2
10<20	0	0	0	0	0	9
6<10	0	0	0	0	2	4
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

56

jective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY



WIND SPEED (knots)

LCC \ Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <3	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
N C & ≥10	4	2	1	+	0
	1234				

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

(2% *of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.*)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

\+ indicates <5% but >0.

1234 ← Number of observations.

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.

Satisfactory conditions - between poor and optimum.

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	+	+	+	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	+	1	1	+
<20 & OR <5	+	2	6	5	1
VSBY ≥5	4	26	50	17	1
≥50 & ≥5	2	12	22	7	+
NC & ≥10	2	10	20	6	+

5082

P

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	2	1	+
<6 & OR <2	+	1	4	6	2
VSBY <2	+	1	3	4	2
<10 & OR <2	+	1	5	8	4
<20 & OR <5	1	4	16	20	11
VSBY ≥5	1	9	29	28	12
≥50 & ≥5	1	4	10	9	3
NC & ≥10	+	1	3	2	+

5374

T

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	+	2	4	1
VSBY ≥5	2	11	48	31	5
≥50 & ≥5	2	9	32	17	2
NC & ≥10	1	7	29	14	2

724

V

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	+
<6 & OR <2	0	+	+	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	0	+	1	1	1
<20 & OR <5	+	2	6	7	4
VSBY ≥5	2	16	36	34	9
≥50 & ≥5	1	10	19	15	4
NC & ≥10	1	9	18	14	3

3828

X

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	1	4
VSBY <2	0	0	+	1	4
<10 & OR <2	0	0	+	2	5
<20 & OR <5	+	1	5	14	16
VSBY ≥5	1	7	25	32	13
≥50 & ≥5	1	4	13	14	5
NC & ≥10	1	2	8	6	1

1276

1

INSUFFICIENT DATA

WIND SPEE

LCC – VSBY	0-3	4-
<1.5 & OR <.5	1	
<6 & OR <2	1	
VSBY <2	1	
<10 & OR <2	1	
<20 & OR <5	2	1
VSBY ≥5	3	1
≥50 & ≥5	1	
NC & ≥10	1	

6

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	3	1
<6 & OR <2	+	2	4	5	4
VSBY <2	+	1	3	4	4
<10 & OR <2	1	3	7	7	5
<20 & OR <5	1	7	19	17	7
VSBY ≥5	2	16	36	18	3
≥50 & ≥5	1	8	18	5	1
NC & ≥10	1	6	13	3	+

2213

7

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	1	1
<6 & OR <2	0	2	5	3	4
VSBY <2	0	1	3	1	1
<10 & OR <2	0	7	11	6	7
<20 & OR <5	1	9	19	14	9
VSBY ≥5	3	22	30	22	10
≥50 & ≥5	2	12	12	8	3
NC & ≥10	2	11	12	8	1

224

8

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	4	2	2
<6 & OR <2	+	2	8	5	4
VSBY <2	+	1	4	2	2
<10 & OR <2	+	5	11	11	6
<20 & OR <5	2	10	20	17	9
VSBY ≥5	5	20	30	22	7
≥50 & ≥5	3	8	13	6	1
NC & ≥10	3	8	12	5	+

321

9

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	3	3	1
<6 & OR <2	1	4	6	6	1
VSBY <2	1	3	5	4	1
<10 & OR <2	1	4	7	6	1
<20 & OR <5	1	8	18	13	2
VSBY ≥5	5	17	39	12	1
≥50 & ≥5	3	7	17	3	0
NC & ≥10	3	6	13	2	0

327

10

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	1	2
<6 & OR <2	+	1	3	5	5
VSBY <2	+	1	3	4	5
<10 & OR <2	+	2	6	8	7
<20 & OR <5	1	5	14	25	15
VSBY ≥5	1	7	24	28	12
≥50 & ≥5	+	3	8	7	3
NC & ≥10	+	2	3	3	1

939

11

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	3	3	2
<6 & OR <2	0	4	6	7	5
VSBY <2	0	2	4	3	4
<10 & OR <2	+	5	12	14	8
<20 & OR <5	1	9	24	23	11
VSBY ≥5	1	13	30	19	5
≥50 & ≥5	+	7	11	6	1
NC & ≥10	+	5	7	4	1

1277

WIND SPEE

LCC – VSBY	0-3	4-10
<1.5 & OR <.5	+	
<6 & OR <2	+	
VSBY <2	+	
<10 & OR <2	+	
<20 & OR <5	1	1
VSBY ≥5	2	1
≥50 & ≥5	1	
NC & ≥10	1	

16

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	1
<6 & OR <2	+	2	3	5	3
VSBY <2	+	1	2	2	1
<10 & OR <2	+	3	7	8	5
<20 & OR <5	1	7	16	16	9
VSBY ≥5	2	13	34	27	8
≥50 & ≥5	1	6	16	10	2
NC & ≥10	1	4	9	6	1

852

17

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	2	+
<6 & OR <2	+	4	6	6	2
VSBY <2	+	2	2	4	1
<10 & OR <2	+	6	13	12	4
<20 & OR <5	1	8	24	23	5
VSBY ≥5	1	15	35	24	6
≥50 & ≥5	1	7	10	7	2
NC & ≥10	+	6	9	5	1

737

18

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	1	4	3	1
VSBY <2	+	1	2	1	+
<10 & OR <2	+	3	8	6	2
<20 & OR <5	1	7	20	12	3
VSBY ≥5	3	19	42	20	4
≥50 & ≥5	2	7	14	6	1
NC & ≥10	2	6	12	5	1

1521

19

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	1
<6 & OR <2	+	2	3	3	2
VSBY <2	+	1	1	1	1
<10 & OR <2	+	3	7	5	3
<20 & OR <5	1	8	19	17	6
VSBY ≥5	3	15	41	26	6
≥50 & ≥5	1	6	15	6	1
NC & ≥10	1	5	12	5	1

1571

20

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	1	+
<6 & OR <2	0	1	3	2	1
VSBY <2	0	0	1	1	+
<10 & OR <2	0	2	6	3	1
<20 & OR <5	0	4	12	9	3
VSBY ≥5	2	25	44	17	3
≥50 & ≥5	1	15	21	6	1
NC & ≥10	1	11	15	3	1

564

21

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	1	1
<6 & OR <2	+	1	2	3	2
VSBY <2	+	+	+	1	1
<10 & OR <2	+	3	8	8	5
<20 & OR <5	+	7	18	18	10
VSBY ≥5	1	15	34	28	11
≥50 & ≥5	+	6	12	10	3
NC & ≥10	+	5	10	7	2

2663

WIND SPEED

LCC – VSBY	0-3	4-10
<1.5 & OR <.5	0	
<6 & OR <2	0	
VSBY <2	0	
<10 & OR <2	+	2
<20 & OR <5	+	5
VSBY ≥5	1	13
≥50 & ≥5	1	7
NC & ≥10	1	7

26

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	2	3	2	1
VSBY <2	+	1	1	1	+
<10 & OR <2	+	4	10	7	2
<20 & OR <5	1	8	23	14	5
VSBY ≥5	2	18	42	24	5
≥50 & ≥5	1	8	16	10	2
NC & ≥10	1	7	14	8	2

1769

27

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	3	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	1	5	8	3	1
<20 & OR <5	2	12	20	7	1
VSBY ≥5	5	29	45	15	2
≥50 & ≥5	3	14	19	6	1
NC & ≥10	2	12	17	5	1

5070

28

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	1	+	+
<6 & OR <2	1	2	1	+	+
VSBY <2	1	2	1	+	+
<10 & OR <2	1	4	3	+	+
<20 & OR <5	2	10	8	1	+
VSBY ≥5	8	44	35	5	+
≥50 & ≥5	6	33	26	4	+
NC & ≥10	4	20	18	3	+

4538

29

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	+
<6 & OR <2	0	1	3	2	+
VSBY <2	0	+	+	1	+
<10 & OR <2	+	3	11	7	1
<20 & OR <5	+	9	26	16	2
VSBY ≥5	2	24	42	19	2
≥50 & ≥5	2	13	12	3	+
NC & ≥10	2	10	10	2	+

2020

30

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	3	6	4	1
<20 & OR <5	1	6	15	9	3
VSBY ≥5	2	19	46	24	6
≥50 & ≥5	1	12	26	12	3
NC & ≥10	1	11	23	11	2

1615

31

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	+	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	6	2	+
<20 & OR <5	1	5	13	4	+
VSBY ≥5	4	32	50	11	1
≥50 & ≥5	3	25	33	6	+
NC & ≥10	3	24	30	5	+

2224

WIND SPEE

LCC – VSBY	0-3	4-10
<1.5 & OR <.5	0	+
<6 & OR <2	+	1
VSBY <2	0	+
<10 & OR <2	+	2
<20 & OR <5	1	5
VSBY ≥5	3	25
≥50 & ≥5	2	18
NC & ≥10	2	17

36

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	2	+
VSBY <2	+	+	1	1	+
<10 & OR <2	+	2	6	5	1
<20 & OR <5	+	4	16	11	1
VSBY ≥5	2	22	49	17	1
≥50 & ≥5	1	18	34	7	1
NC & ≥10	1	16	28	6	+

3236

37

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	0	1	2	1	+
VSBY <2	0	0	+	+	0
<10 & OR <2	0	1	7	3	+
<20 & OR <5	+	4	16	6	+
VSBY ≥5	3	25	55	14	1
≥50 & ≥5	3	18	38	6	+
NC & ≥10	2	17	34	5	+

746

38

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	1	5	2	0
<20 & OR <5	+	3	14	4	+
VSBY ≥5	2	22	59	14	+
≥50 & ≥5	2	18	44	9	0
NC & ≥10	2	17	40	8	0

1143

39

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	+	1	+	0
<20 & OR <5	0	+	3	1	0
VSBY ≥5	+	5	37	57	2
≥50 & ≥5	+	4	31	45	1
NC & ≥10	+	4	30	45	1

727

40

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	+	1	0	+
VSBY <2	0	0	+	0	0
<10 & OR <2	1	1	4	+	+
<20 & OR <5	1	5	11	2	+
VSBY ≥5	7	33	49	10	1
≥50 & ≥5	6	27	34	6	+
NC & ≥10	6	26	33	6	+

744

41

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	3	+	+
<20 & OR <5	1	5	11	1	+
VSBY ≥5	10	33	46	10	1
≥50 & ≥5	9	28	32	8	1
NC & ≥10	8	26	29	8	1

280

WIND SPEED

LCC – VSBY	0-3	4-
<1.5 & OR <.5	0	
<6 & OR <2	1	
VSBY <2	0	
<10 & OR <2	+	
<20 & OR <5	1	9
VSBY ≥5	1	26
≥50 & ≥5	+	14
NC & ≥10	+	13

Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

Y-WIND

JANUARY

1

INSUFFICIENT DATA

V

(KNOTS) 22-33	≥34
0	+
+	+
+	+
1	1
7	4
34	9
15	4
14	3

3828

X

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	1	4
VSBY <2	0	0	+	1	4
<10 & OR <2	0	0	+	2	5
<20 & OR <5	+	1	5	14	16
VSBY ≥5	1	7	25	32	13
≥50 & ≥5	1	4	13	14	5
NC & ≥10	1	2	8	6	1

1276

2

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	5	3	1
<6 & OR <2	1	5	10	7	2
VSBY <2	1	5	9	7	2
<10 & OR <2	1	6	12	9	2
<20 & OR <5	2	11	24	16	4
VSBY ≥5	3	14	28	13	3
≥50 & ≥5	1	4	9	3	1
NC & ≥10	1	3	6	2	+

1862

3

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	5	1	1
<6 & OR <2	1	4	13	4	1
VSBY <2	+	4	12	4	1
<10 & OR <2	1	5	13	5	1
<20 & OR <5	2	10	21	7	1
VSBY ≥5	5	24	30	9	1
≥50 & ≥5	3	14	15	4	+
NC & ≥10	3	8	9	2	0

595

4

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	6	4	3	2
<6 & OR <2	2	8	8	5	3
VSBY <2	1	6	6	5	3
<10 & OR <2	2	8	9	6	3
<20 & OR <5	3	12	15	9	3
VSBY ≥5	6	16	29	17	2
≥50 & ≥5	4	10	15	7	1
NC & ≥10	3	9	12	6	1

509

5

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	4	3	2
<6 & OR <2	0	2	6	7	4
VSBY <2	0	1	5	5	4
<10 & OR <2	0	4	9	9	6
<20 & OR <5	1	7	20	16	9
VSBY ≥5	3	17	33	17	5
≥50 & ≥5	3	9	13	2	+
NC & ≥10	2	7	10	1	0

242

9

(KNOTS) 22-33	≥34
3	1
6	1
4	1
6	1
13	2
12	1
3	0
2	0

327

10

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	1	2
<6 & OR <2	+	1	3	5	5
VSBY <2	+	1	3	4	5
<10 & OR <2	+	2	6	8	7
<20 & OR <5	1	5	14	25	15
VSBY ≥5	1	7	24	28	12
≥50 & ≥5	+	3	8	7	3
NC & ≥10	+	2	3	3	1

939

11

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	3	3	2
<6 & OR <2	0	4	6	7	5
VSBY <2	0	2	4	3	4
<10 & OR <2	+	5	12	14	8
<20 & OR <5	1	9	24	23	11
VSBY ≥5	1	13	30	19	5
≥50 & ≥5	+	7	11	6	1
NC & ≥10	+	5	7	4	1

1277

12

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	4	2
<6 & OR <2	+	3	7	6	3
VSBY <2	+	2	4	3	2
<10 & OR <2	+	5	14	12	6
<20 & OR <5	1	10	26	19	8
VSBY ≥5	2	17	34	18	5
≥50 & ≥5	1	7	12	5	1
NC & ≥10	1	6	8	3	1

1049

13

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	3	2
<6 & OR <2	1	4	7	6	4
VSBY <2	+	3	5	3	2
<10 & OR <2	1	7	13	11	7
<20 & OR <5	1	12	24	19	10
VSBY ≥5	2	16	29	18	8
≥50 & ≥5	1	7	11	5	2
NC & ≥10	1	5	7	3	1

965

14

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	2	1
<6 & OR <2	+	2	6	5	2
VSBY <2	+	1	4	3	1
<10 & OR <2	+	3	10	11	4
<20 & OR <5	+	8	21	18	7
VSBY ≥5	2	15	32	23	8
≥50 & ≥5	1	6	10	6	1
NC & ≥10	1	5	8	5	1

1842

15

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	0	+	1	1	1
VSBY <2	0	+	1	1	1
<10 & OR <2	0	+	2	3	1
<20 & OR <5	+	2	5	8	3
VSBY ≥5	4	21	42	22	3
≥50 & ≥5	3	17	30	15	2
NC & ≥10	2	11	19	9	1

743

19

(KNOTS) 22-33	≥34
1	1
3	2
1	1
5	3
17	6
26	6
6	1
5	1

1571

20

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	1	+
<6 & OR <2	0	1	3	2	1
VSBY <2	0	0	1	1	+
<10 & OR <2	0	2	6	3	1
<20 & OR <5	0	4	12	9	3
VSBY ≥5	2	25	44	17	3
≥50 & ≥5	1	15	21	6	1
NC & ≥10	1	11	15	3	1

564

21

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	1	1
<6 & OR <2	+	1	2	3	2
VSBY <2	+	+	+	1	1
<10 & OR <2	+	3	8	8	5
<20 & OR <5	+	7	18	18	10
VSBY ≥5	1	15	34	28	11
≥50 & ≥5	+	6	12	10	3
NC & ≥10	+	5	10	7	2

2663

22

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	0	+	2	2	2
VSBY <2	0	+	+	1	1
<10 & OR <2	+	2	6	7	4
<20 & OR <5	+	5	15	16	8
VSBY ≥5	1	13	36	29	11
≥50 & ≥5	1	7	18	12	4
NC & ≥10	1	7	15	9	2

2259

23

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	+	1	1	3	3
VSBY <2	+	+	+	1	3
<10 & OR <2	+	2	5	9	6
<20 & OR <5	+	5	13	17	9
VSBY ≥5	1	14	34	29	10
≥50 & ≥5	+	9	19	12	5
NC & ≥10	+	7	15	10	3

1165

24

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	3	2
VSBY <2	0	+	1	1	1
<10 & OR <2	+	3	9	8	3
<20 & OR <5	+	7	19	16	6
VSBY ≥5	1	16	39	26	6
≥50 & ≥5	1	9	19	12	2
NC & ≥10	1	8	15	10	1

1153

25

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	1
<6 & OR <2	+	2	3	3	2
VSBY <2	+	1	1	1	1
<10 & OR <2	+	4	9	8	4
<20 & OR <5	1	8	17	14	6
VSBY ≥5	2	18	42	22	6
≥50 & ≥5	1	9	22	10	2
NC & ≥10	+	8	19	8	1

1479

29

(KNOTS) 22-33	≥34
1	+
2	+
1	+
7	1
16	2
19	2
3	+
2	+

2020

30

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	3	6	4	1
<20 & OR <5	1	6	15	9	3
VSBY ≥5	2	19	46	24	6
≥50 & ≥5	1	12	26	12	3
NC & ≥10	1	11	23	11	2

1615

31

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	+	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	6	2	+
<20 & OR <5	1	5	13	4	+
VSBY ≥5	4	32	50	11	1
≥50 & ≥5	3	25	33	6	+
NC & ≥10	3	24	30	5	+

2224

32

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	1	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	6	3	+
<20 & OR <5	1	5	15	6	1
VSBY ≥5	3	25	54	15	2
≥50 & ≥5	2	18	34	7	1
NC & ≥10	2	17	32	7	1

3958

33

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	1	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	4	3	1
<20 & OR <5	1	5	11	6	1
VSBY ≥5	3	28	51	15	2
≥50 & ≥5	2	17	26	6	+
NC & ≥10	2	15	23	5	+

1704

34

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	1	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	1	5	4	1
<20 & OR <5	+	2	15	10	1
VSBY ≥5	1	17	57	19	2
≥50 & ≥5	1	14	40	9	+
NC & ≥10	1	13	33	6	+

4833

35

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	+	1	2	1
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	5	6	1
<20 & OR <5	+	2	14	16	3
VSBY ≥5	2	15	39	30	4
≥50 & ≥5	2	13	24	14	2
NC & ≥10	2	11	19	10	1

5466

39

(KNOTS) 22-33	≥34
0	0
0	0
0	0
+	0
1	0
57	2
45	1
45	1

727

40

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	+	1	0	+
VSBY <2	0	0	+	0	0
<10 & OR <2	1	1	4	+	+
<20 & OR <5	1	5	11	2	+
VSBY ≥5	7	33	49	10	1
≥50 & ≥5	6	27	34	6	+
NC & ≥10	6	26	33	6	+

744

41

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	3	+	+
<20 & OR <5	1	5	11	1	+
VSBY ≥5	10	33	46	10	1
≥50 & ≥5	9	28	32	8	1
NC & ≥10	8	26	29	8	1

280

42

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	0	1	2	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	5	11	3	0
<20 & OR <5	1	9	28	5	0
VSBY ≥5	1	26	62	9	0
≥50 & ≥5	+	14	26	3	0
NC & ≥10	+	13	25	3	0

778

43

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	4	3	1	0
<20 & OR <5	+	9	9	1	0
VSBY ≥5	6	54	38	1	0
≥50 & ≥5	5	42	26	+	0
NC & ≥10	5	41	24	+	0

791

44

LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	1	2	+	+
VSBY <2	0	+	1	0	0
<10 & OR <2	+	3	7	2	+
<20 & OR <5	+	6	19	5	+
VSBY ≥5	2	29	54	8	+
≥50 & ≥5	2	22	35	4	0
NC & ≥10	1	19	28	2	0

2215

45

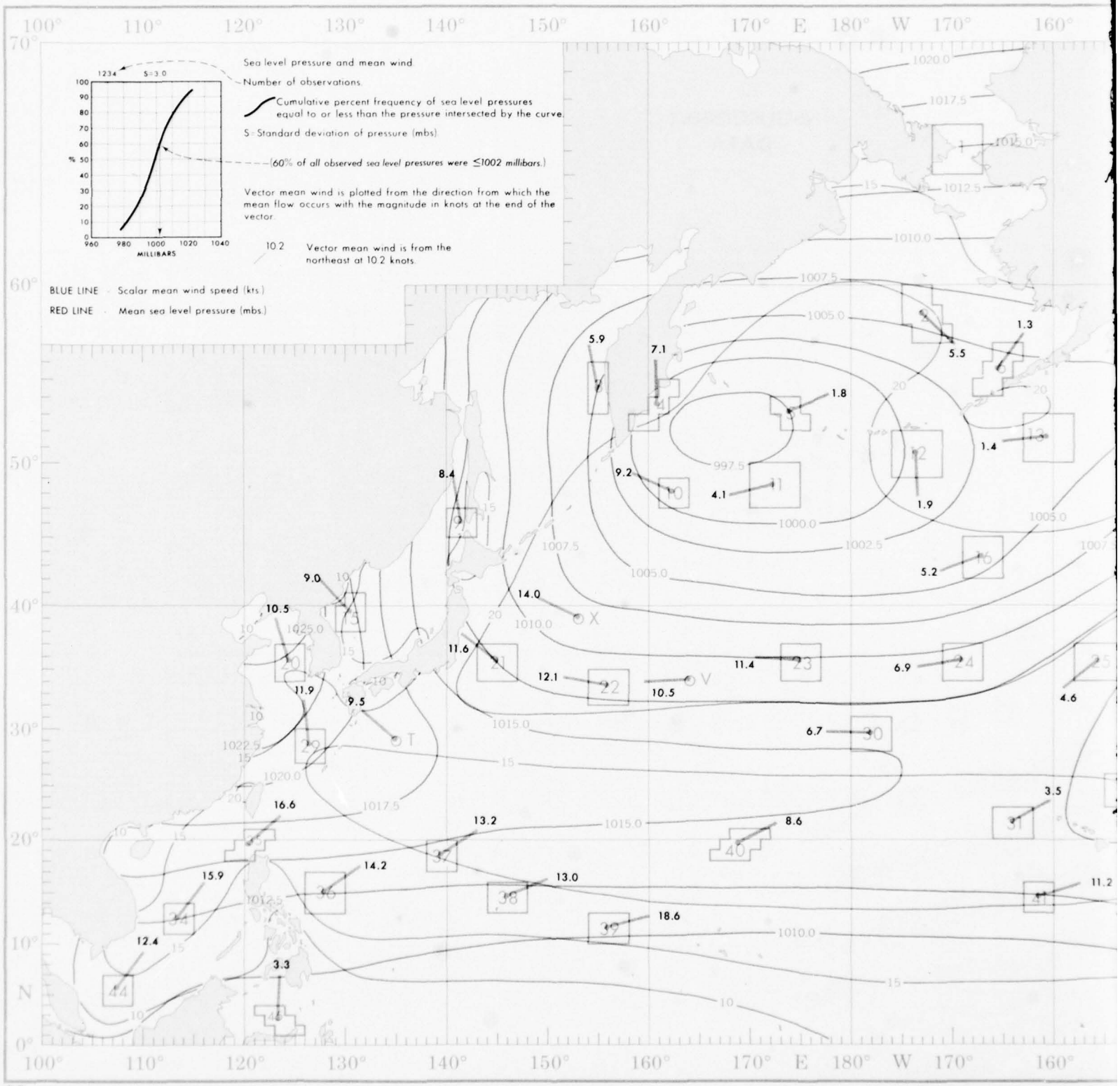
LCC ↓ VSBY	WIND SPEED (KNOTS) 0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	0	0	0
<20 & OR <5	2	13	0	0	0
VSBY ≥5	13	70	17	0	0
≥50 & ≥5	11	55	15	0	0
NC & ≥10	11	55	15	0	0

53

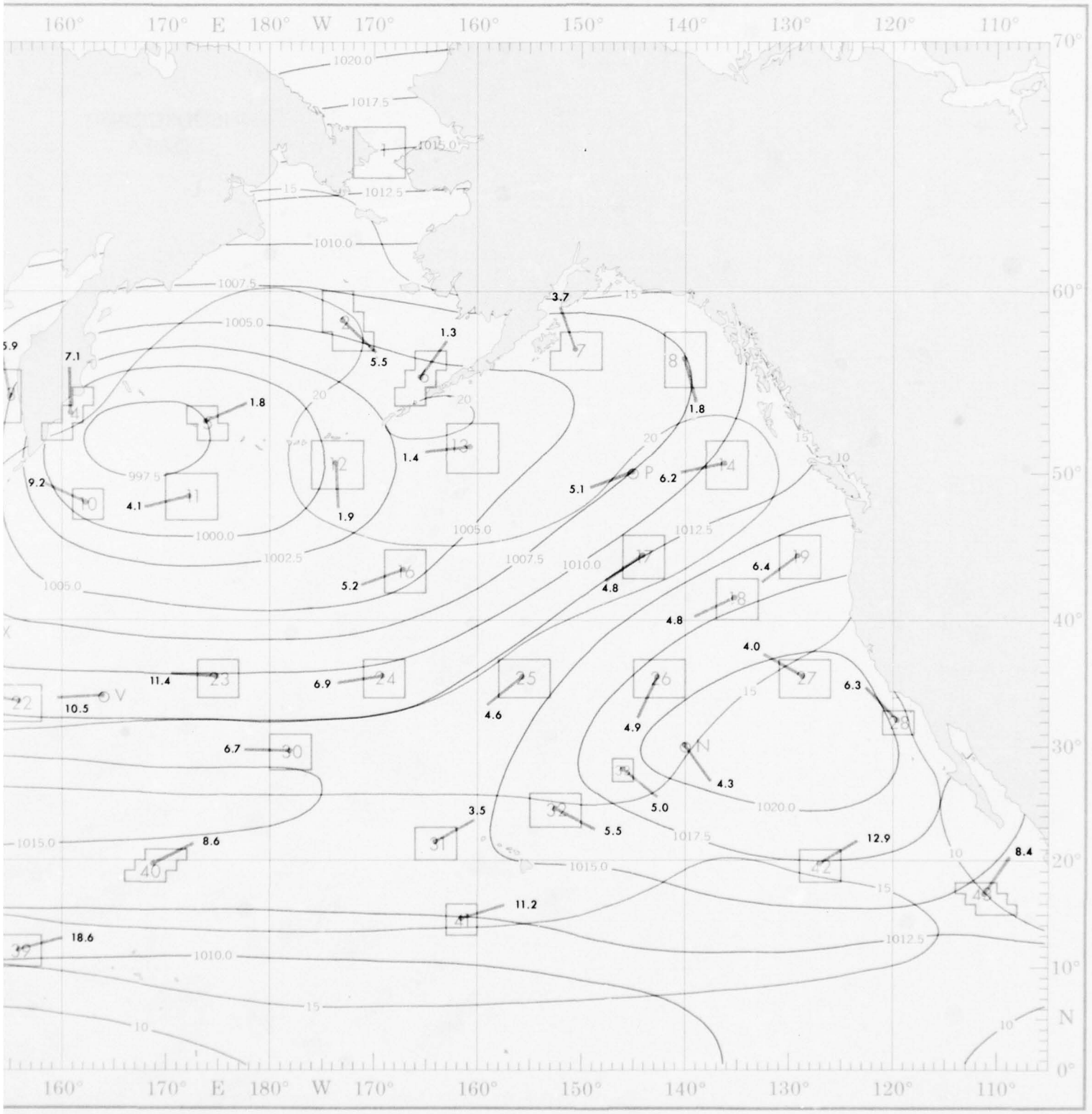
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site page) are based on all available data subjectively adjusted where bias was evident.

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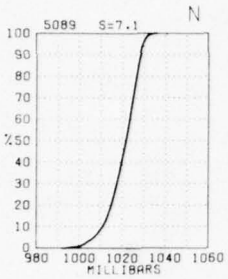
SEA LEVEL P

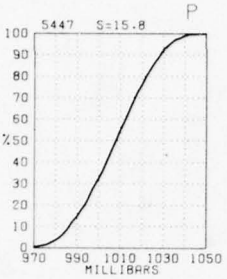


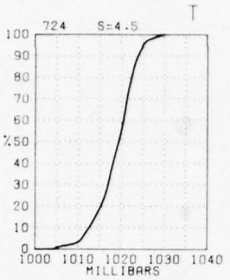
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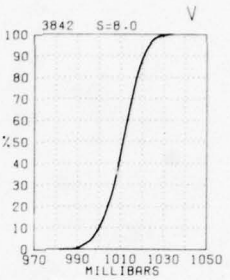


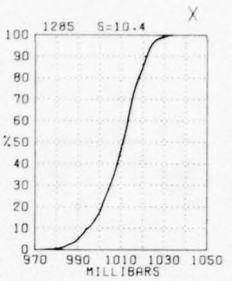
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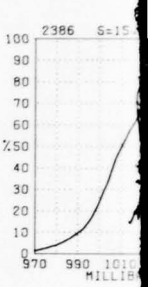


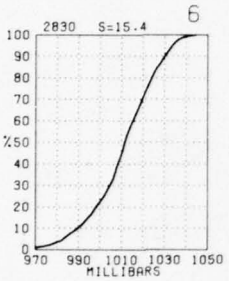


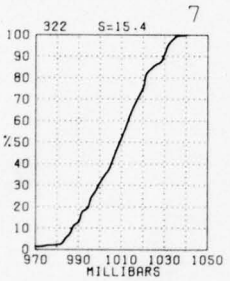


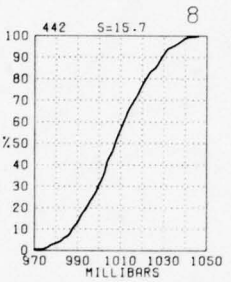


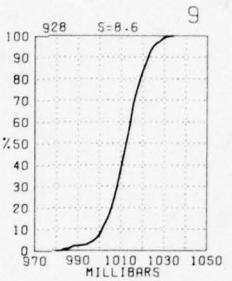
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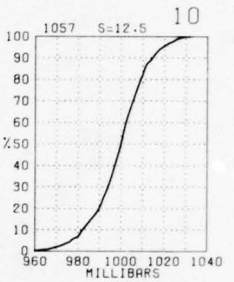


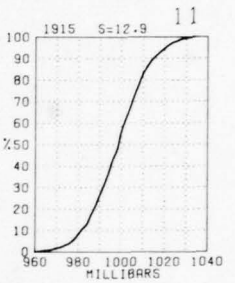


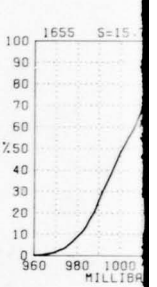


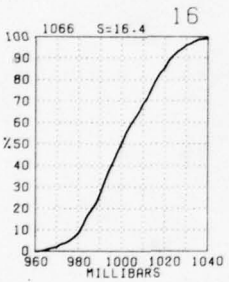


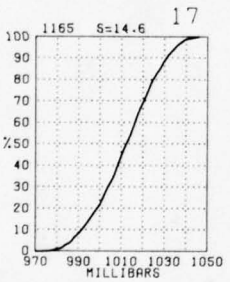


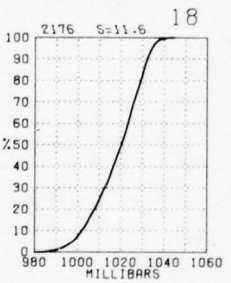


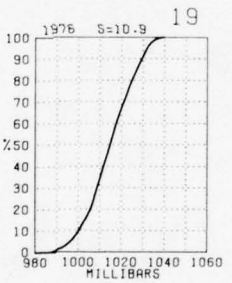


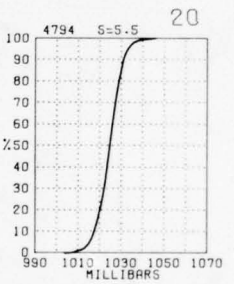


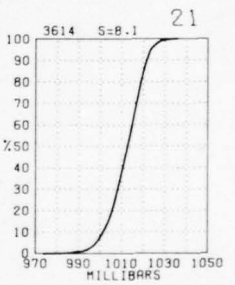


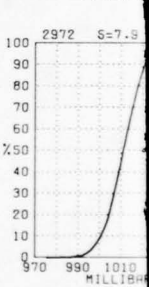


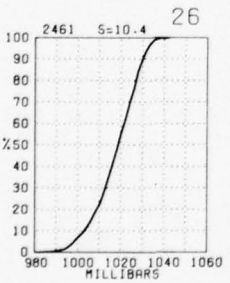


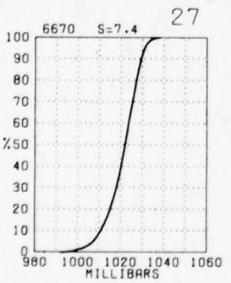


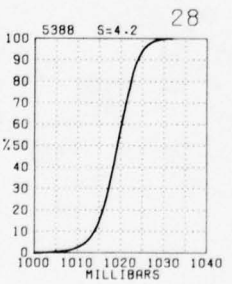


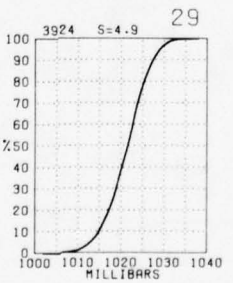


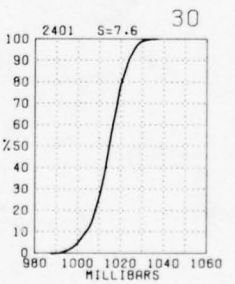


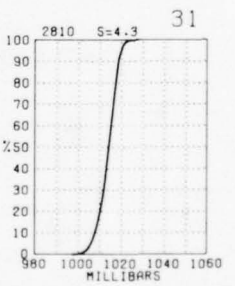


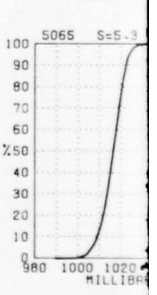


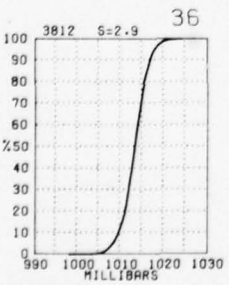


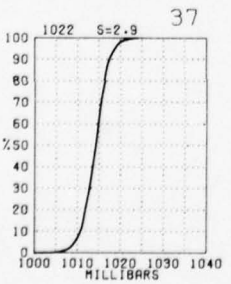


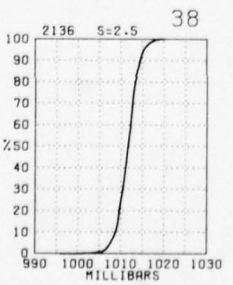


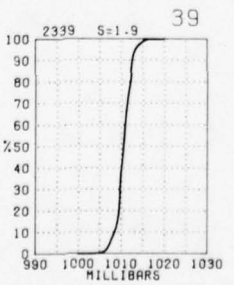


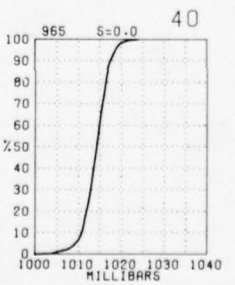


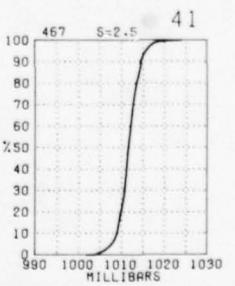


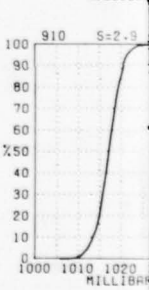






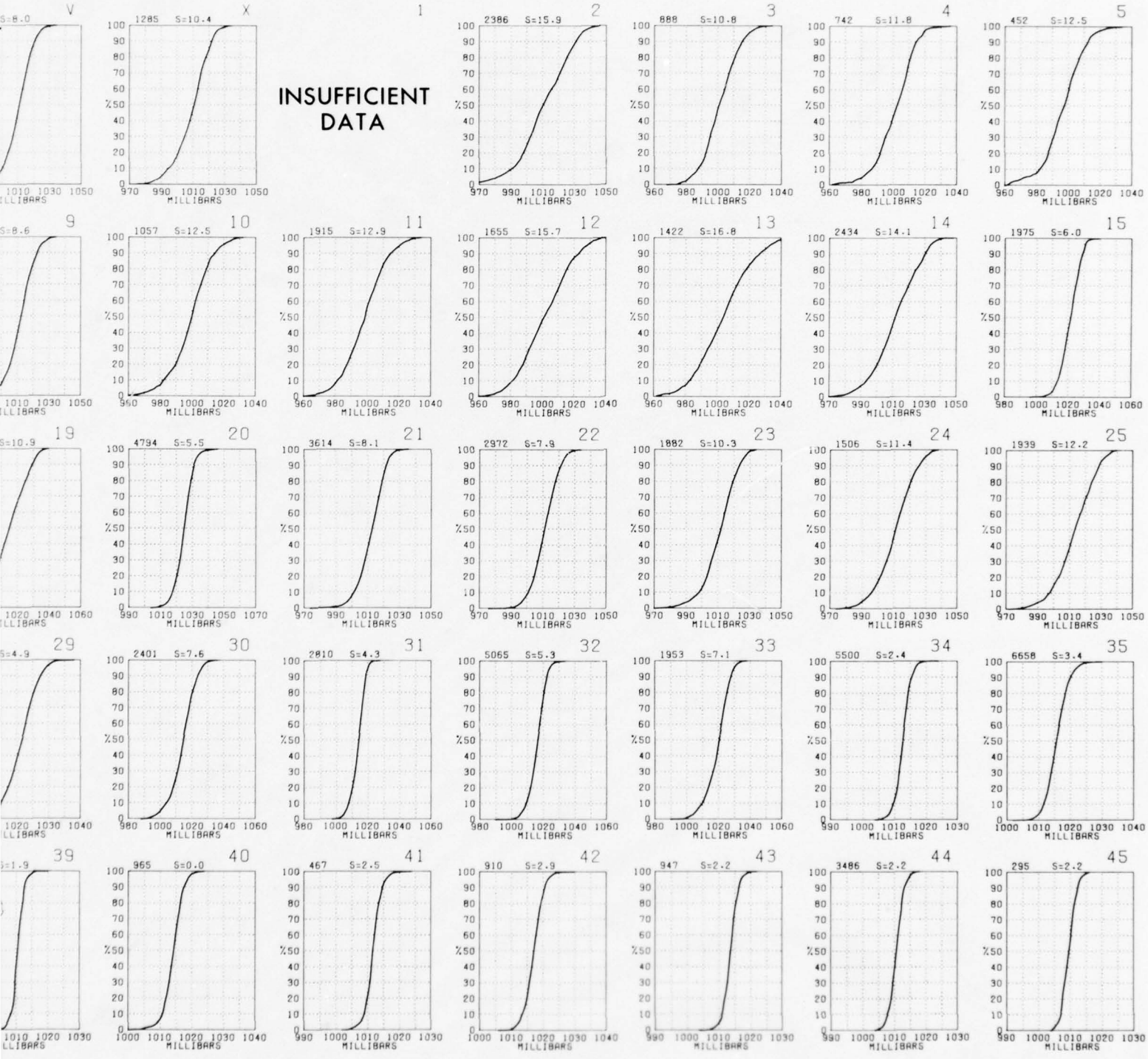






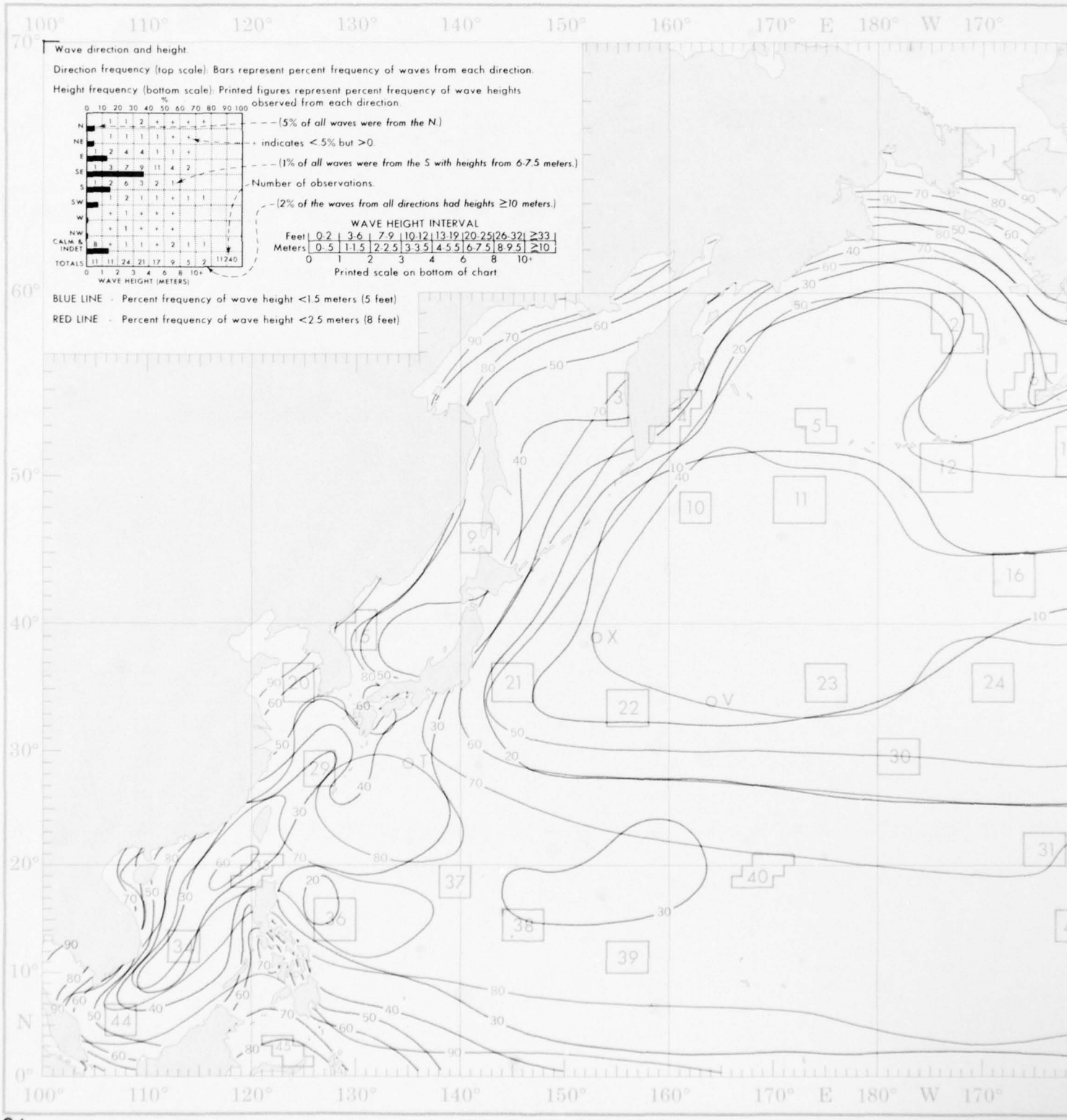
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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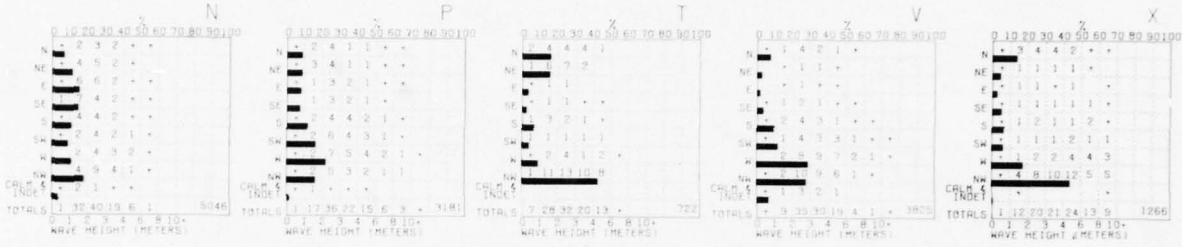
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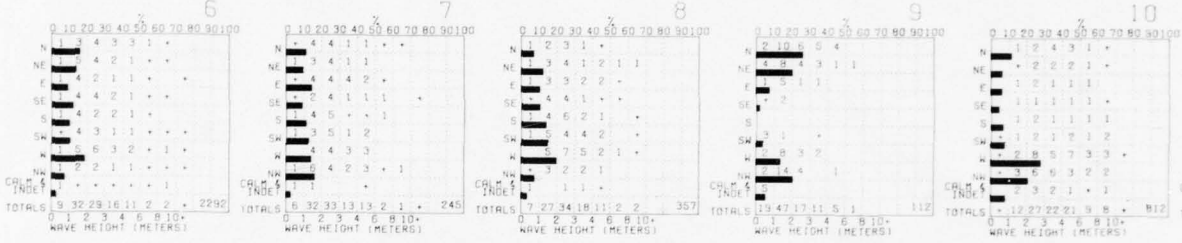

Wave direction and height.
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
% 0 10 20 30 40 50 60 70 80 90 100
N NE E SE S SW W NW CALM & INDET TOTALS
0 1 2 3 4 6 8 10+
WAVE HEIGHT (METERS)
– – – (5% of all waves were from the N.)
+ indicates < 5% but >0.
– – – (1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
– (2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 | 3-6 | 7-9 | 10-12 | 13-19 | 20-25 | 26-32 | ≥33
Meters 0-.5 | 1-1.5 | 2-2.5 | 3-3.5 | 4-5.5 | 6-7.5 | 8-9.5 | ≥10
0 1 2 3 4 6 8 10+
Printed scale on bottom of chart
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

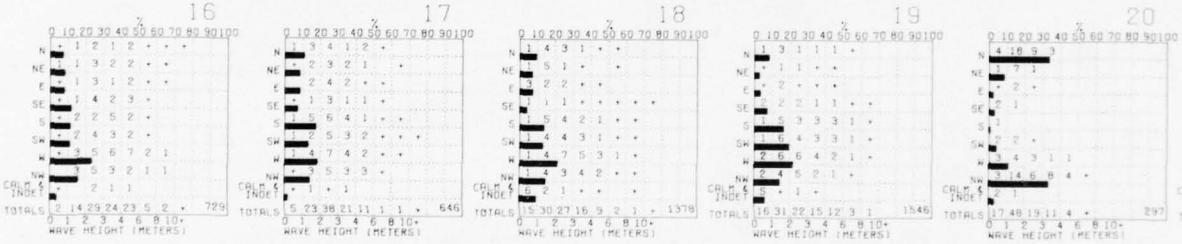
WAVES (<1.5 AND <2.5 METERS)

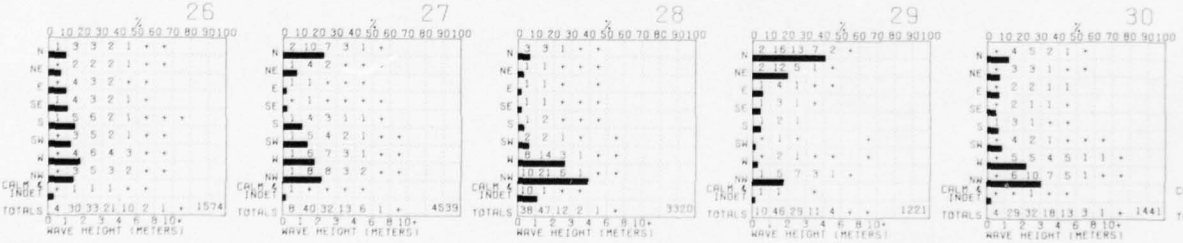


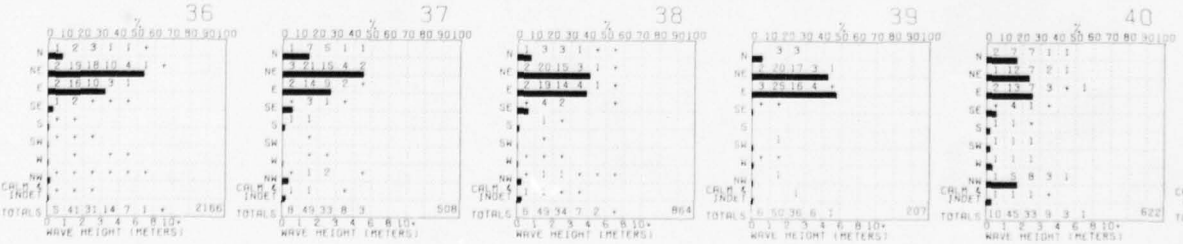
WAVE DIRECTION AND HEIGHT









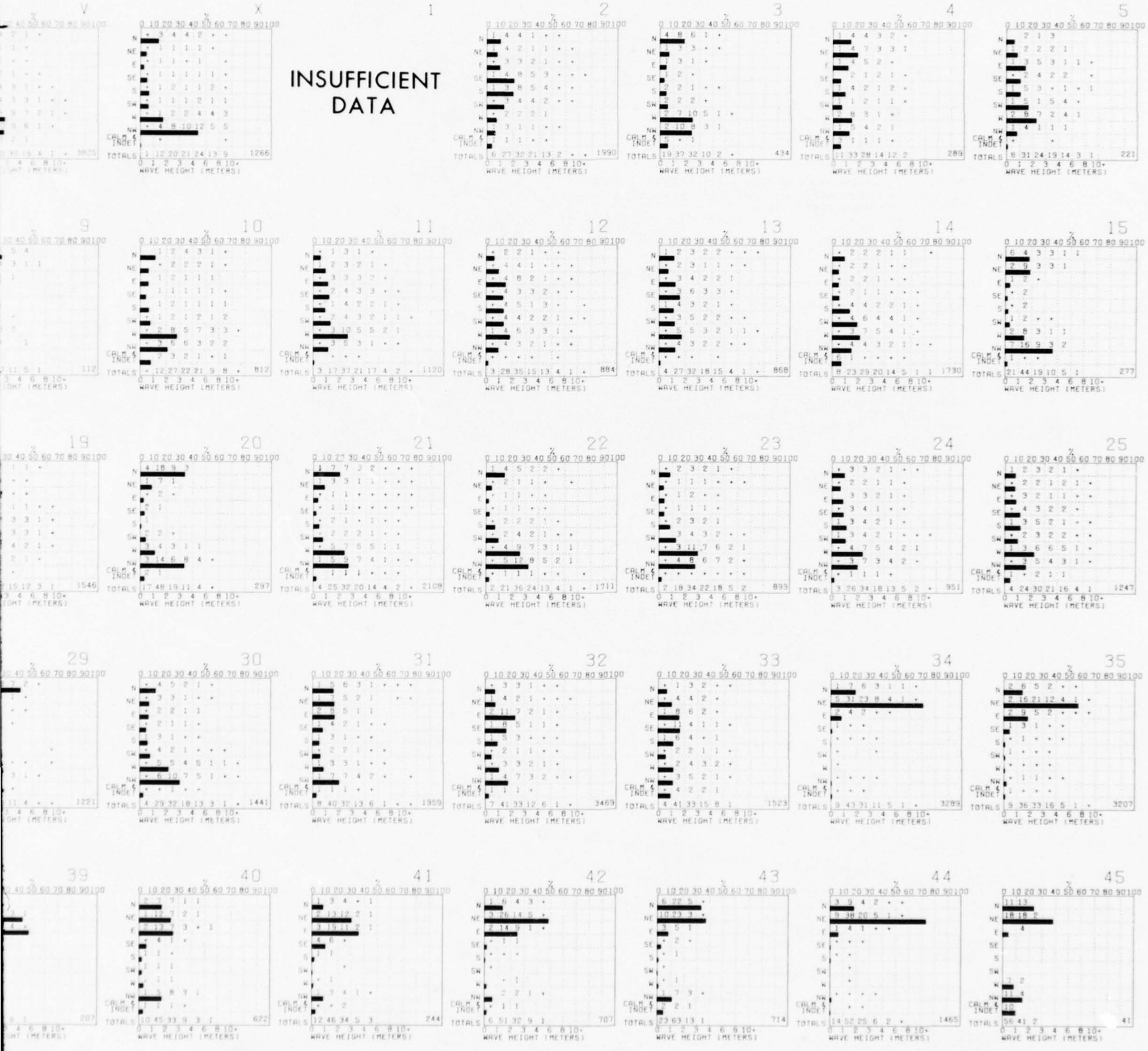


Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

GHT

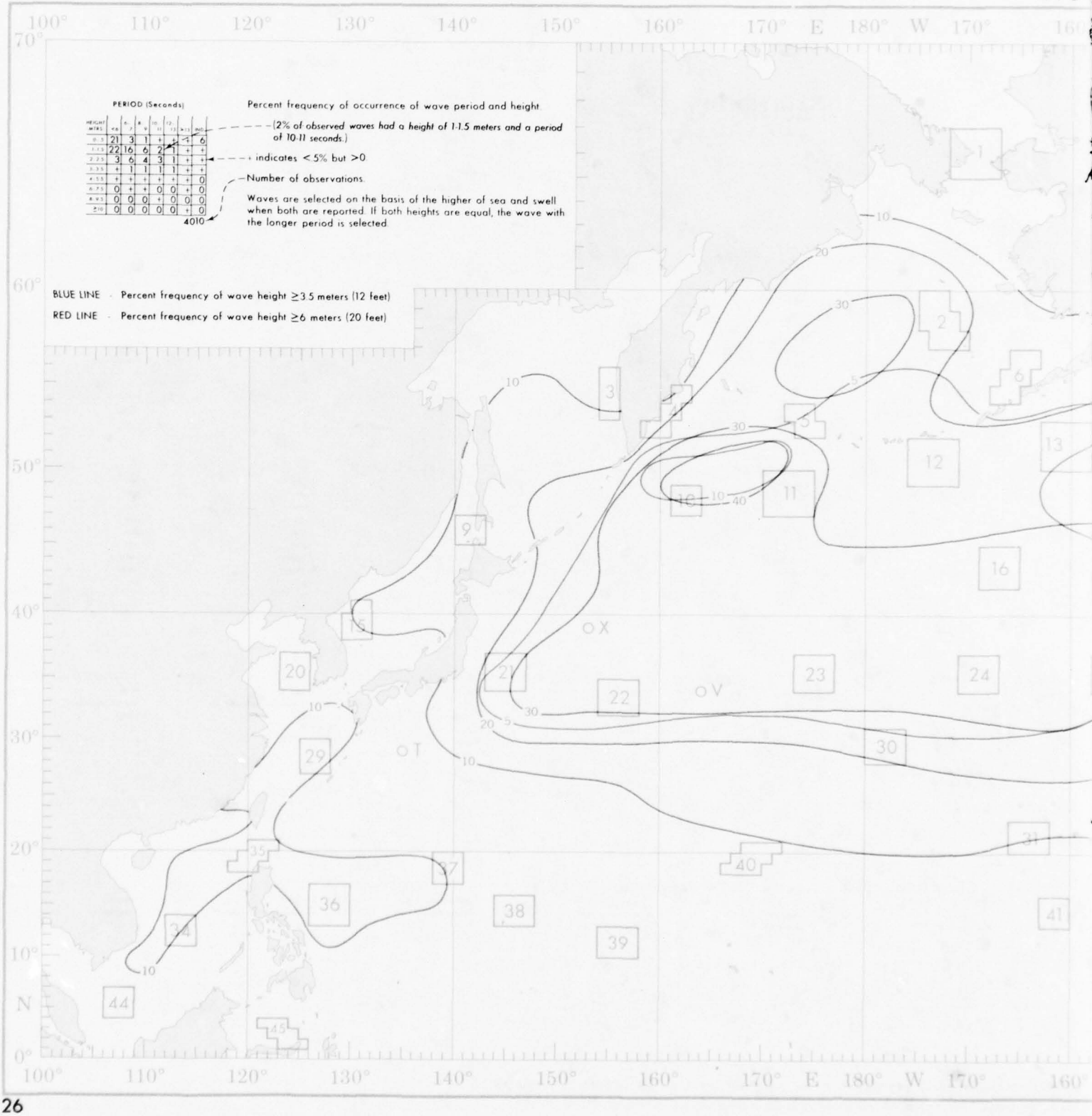
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INSUFFICIENT DATA



he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

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PERIOD (Seconds)
HEIGHT METRES
<6
7
9
11
13
>13
NO.
0-1.5 21 3 1 + + 6
1.5-3 22 16 6 2 1 + +
3-4.5 3 6 4 3 1 + +
4.5-6 + 1 1 1 1 + +
6-7.5 + + + + + + 0
7.5-9 0 + + 0 0 + 0
9-12 0 0 0 + 0 0 0
>12 0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
10 20 30 5 40
OX OV OT
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	11	12	6	2	+	+	2
2-2.5	5	16	11	5	1	1	1
3-3.5	1	6	6	3	1	1	+
4-5.5	+	1	3	1	+	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

5048

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	+	0	0	0	+
1-1.5	4	8	2	1	1	+	1
2-2.5	3	14	11	4	3	2	+
3-3.5	1	5	10	3	2	1	+
4-5.5	1	3	7	2	2	+	+
6-7.5	0	1	3	1	1	+	0
8-9.5	0	+	1	1	1	+	0
≥10	0	0	+	0	0	0	0

3185

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	4	3	+	0	0	0
1-1.5	+	14	14	0	0	0	0
2-2.5	0	3	28	1	0	+	0
3-3.5	0	1	18	1	0	0	0
4-5.5	0	1	12	+	0	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

723

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	0	0	0	0	+
1-1.5	3	4	1	+	+	0	1
2-2.5	3	13	12	3	1	+	3
3-3.5	1	6	14	5	1	1	2
4-5.5	1	2	8	6	1	+	1
6-7.5	0	1	1	1	1	1	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	+	0	0	0

3825

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	+	0	0	0	1
1-1.5	0	3	6	+	0	0	3
2-2.5	0	4	12	1	+	0	3
3-3.5	0	3	15	2	0	+	1
4-5.5	0	3	16	5	1	+	0
6-7.5	0	1	6	5	+	0	+
8-9.5	0	+	2	3	3	2	0
≥10	0	0	0	0	0	0	0

1268

INSUFFICIENT DATA

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+					
1-1.5	12	7					
2-2.5	6	14					
3-3.5	1	9					
4-5.5	+	3					
6-7.5	0	+					
8-9.5	0	+					
≥10	0	0					

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	19	6	2	1	+	+	3
2-2.5	12	9	3	1	1	+	2
3-3.5	2	9	3	1	+	+	1
4-5.5	+	4	4	2	+	+	+
6-7.5	0	+	1	1	0	+	0
8-9.5	0	+	+	+	+	1	0
≥10	0	0	0	0	+	0	0

2328

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	0	+	0	0	2
1-1.5	16	8	4	1	1	+	2
2-2.5	9	9	8	2	2	1	1
3-3.5	1	5	4	1	1	+	+
4-5.5	2	4	3	2	1	+	+
6-7.5	0	1	0	1	+	0	0
8-9.5	0	0	0	+	+	0	0
≥10	0	+	0	0	0	0	0

251

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	+	+	0	0	2
1-1.5	12	8	4	2	1	0	0
2-2.5	7	12	8	4	1	+	1
3-3.5	3	3	6	3	1	1	1
4-5.5	3	1	2	1	2	1	+
6-7.5	0	0	1	1	0	0	0
8-9.5	0	+	0	1	0	1	0
≥10	0	0	0	0	0	0	0

365

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	19
1-1.5	9	5	2	0	0	0	30
2-2.5	3	3	0	0	0	0	10
3-3.5	0	1	1	1	0	0	8
4-5.5	1	0	0	0	0	0	4
6-7.5	0	0	0	0	0	0	1
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

116

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	0	0	0	0	0	+
1-1.5	2	4	3	+	+	+	2
2-2.5	1	9	9	4	1	0	2
3-3.5	+	4	12	3	2	0	2
4-5.5	0	2	10	5	2	1	1
6-7.5	0	1	4	2	1	+	+
8-9.5	0	+	4	2	1	1	1
≥10	0	0	+	0	0	0	0

814

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	0	0	0	+
1-1.5	3	8	3	1	+	+	1
2-2.5	2	9	15	6	2	+	1
3-3.5	+	3	7	6	3	1	+
4-5.5	+	2	6	5	3	1	+
6-7.5	0	+	1	1	1	1	0
8-9.5	0	+	+	+	1	+	0
≥10	0	0	0	+	0	0	0

1125

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	+	0	0	0	1
1-1.5	5	6	2	1	+	+	1
2-2.5	3	10	9	3	1	1	2
3-3.5	2	6	7	5	1	1	1
4-5.5	1	4	9	4	3	1	1
6-7.5	0	1	1	1	1	1	0
8-9.5	0	+	0	1	1	+	0
≥10	0	0	0	0	+	0	0

738

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	1
1-1.5	9	8	3	1	1	0	1
2-2.5	5	12	11	6	2	0	1
3-3.5	1	3	8	5	3	+	+
4-5.5	0	2	4	3	2	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	+	0	0	0

651

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	3	+	0	0	0	6
1-1.5	9	12	4	2	+	+	3
2-2.5	5	9	8	3	1	+	1
3-3.5	1	3	5	4	2	+	+
4-5.5	1	1	3	2	1	1	+
6-7.5	0	+	1	+	1	+	+
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	+	0	0	0

1388

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	3	+	+	0	0	5
1-1.5	16	11	2	1	1	+	1
2-2.5	3	6	7	4	2	+	1
3-3.5	1	3	5	3	1	1	1
4-5.5	1	2	3	2	2	2	+
6-7.5	0	+	+	+	+	1	+
8-9.5	0	+	+	0	+	+	0
≥10	0	0	0	0	0	0	0

1554

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	+	0	+	0	0	2
1-1.5	32	12	2	+	0	0	2
2-2.5	6	7	5	1	0	0	0
3-3.5	2	3	4	2	0	0	+
4-5.5	0	+	2	2	0	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

304

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+	0	0	+
1-1.5	10	9	3	1	1	+	1
2-2.5	4	11	10	3	1	1	1
3-3.5	2	4	8	4	2	1	1
4-5.5	1	2	4	3	2	1	1
6-7.5	0	+	1	2	1	1	+
8-9.5	0	0	+	1	+	+	+
≥10	0	+	0	0	0	+	+

2134

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	0	0	0	1
1-1.5	11	11	4	2	1	+	1
2-2.5	4	9	10	5	2	1	2
3-3.5	2	5	6	4	2	1	1
4-5.5	1	1	3	2	1	1	1
6-7.5	0	0	+	+	+	1	+
8-9.5	0	0	0	+	+	+	0
≥10	0	0	0	0	0	0	+

1592

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	2
1-1.5	18	13	5	2	1	+	1
2-2.5	5	13	8	3	1	+	1
3-3.5	1	3	4	2	1	1	+
4-5.5	+	1	2	1	1	1	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

4622

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	4	2	+	0	0	10
1-1.5	25	12	5	2	1	0	1
2-2.5	3	4	2	1	+	+	+
3-3.5	+	+	1	+	+	+	+
4-5.5	+	+	+	+	+	0	0
6-7.5	0	+	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3443

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	1
1-1.5	19	18	5	1	+	+	2
2-2.5	3	12	10	2	1	+	1
3-3.5	+	2	4	2	2	1	0
4-5.5	+	1	1	1	+	+	0
6-7.5	0	+	0	+	0	0	0
8-9.5	0	0	0	0	0	0	+
≥10	0	0	0	0	0	0	0

1241

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+	0	0	+
1-1.5	10	10	5	2	1	+	1
2-2.5	4	9	10	4	2	1	1
3-3.5	1	3	6	5	2	1	1
4-5.5	+	1	3	4	2	2	+
6-7.5	0	+	+	1	1	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	+	0	+	0	0	0

1453

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	1
1-1.5	16	13	5	2	1	+	2
2-2.5	5	9	11	3	1	1	1
3-3.5	1	3	4	3	2	+	1
4-5.5	+	1	2	1	1	1	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	0	0	+	0
≥10	0	0	+	0	0	+	0

1998

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	+
1-1.5	14	19	6	1	1	+	1
2-2.5	5	8	14	3	1	1	+
3-3.5	1	3	4	3	2	+	+
4-5.5	1	1	2	1	1	0	+
6-7.5	0	+	1	+	+	+	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

2178

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	1	0	0	0	1
1-1.5	18	19	7	1	1	1	1
2-2.5	6	9	8	6	3	+	+
3-3.5	+	2	2	1	2	1	+
4-5.5	0	1	1	1	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

516

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	1	0	0	1
1-1.5	23	17	5	2	1	+	1
2-2.5	7	10	10	4	2	1	1
3-3.5	1	2	2	2	+	+	+
4-5.5	+	1	+	+	+	+	0
6-7.5	0	0	0	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

871

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	0	0	0	0	0
1-1.5	25	18	2	2	+	+	2
2-2.5	14	9	8	2	1	0	1
3-3.5	+	2	2	2	0	0	0
4-5.5	0	1	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

207

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	+	0	0	2
1-1.5	21	12	5	2	1	1	1
2-2.5	5	10	8	6	1	1	2
3-3.5	2	2	2	1	+	1	+
4-5.5	+	+	1	1	+	+	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

641

41

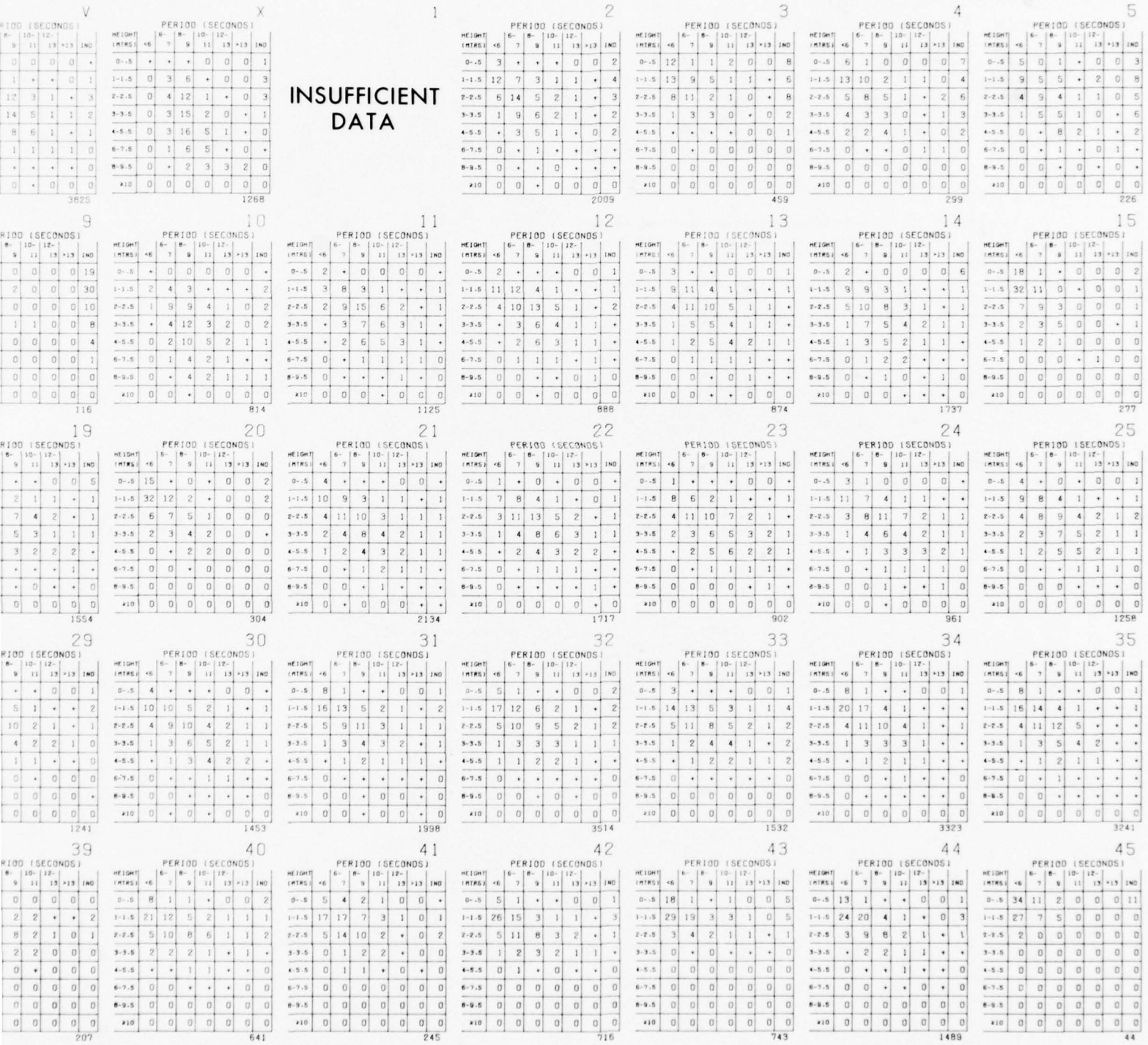
HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	4	2	1	0	0	+
1-1.5	17	17	7	3	1	0	1
2-2.5	5	14	10	2	+	0	2
3-3.5	0	1	2	2	+	0	0
4-5.5	0	1	1	+	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

245

Graphs represent the objective compilation of available data for specified areas without regard.
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

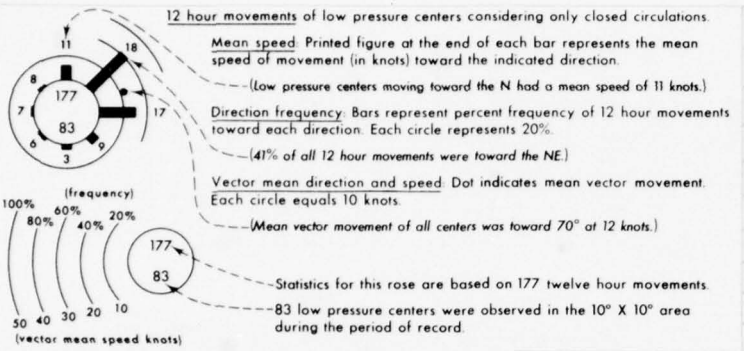
JANUARY

INSUFFICIENT DATA



the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JANUARY



12 hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 11 knots.)

Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.

(41% of all 12 hour movements were toward the NE.)

Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.

(Mean vector movement of all centers was toward 70° at 12 knots.)

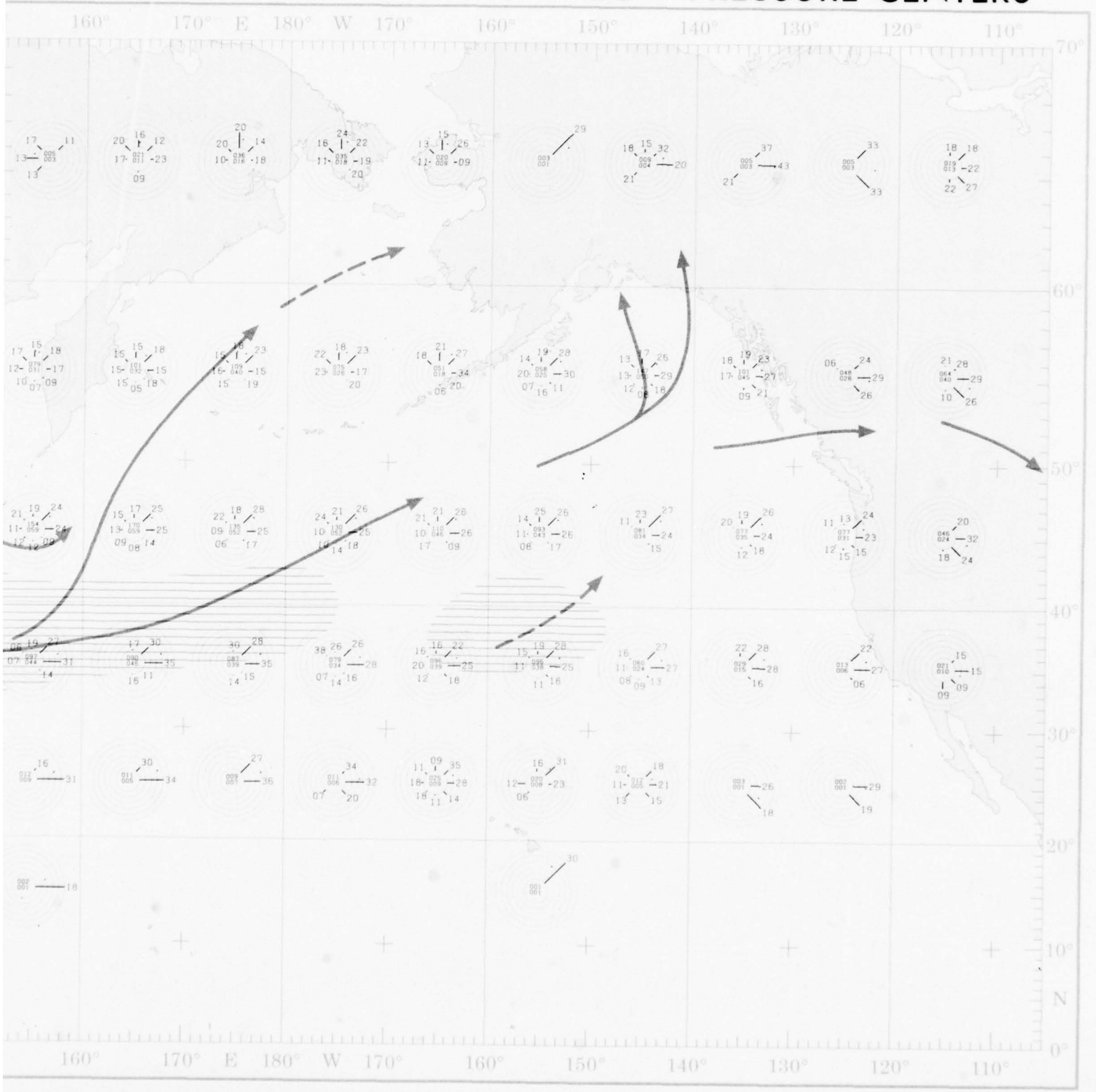
Statistics for this rose are based on 177 twelve hour movements.

83 low pressure centers were observed in the 10° X 10° area during the period of record.

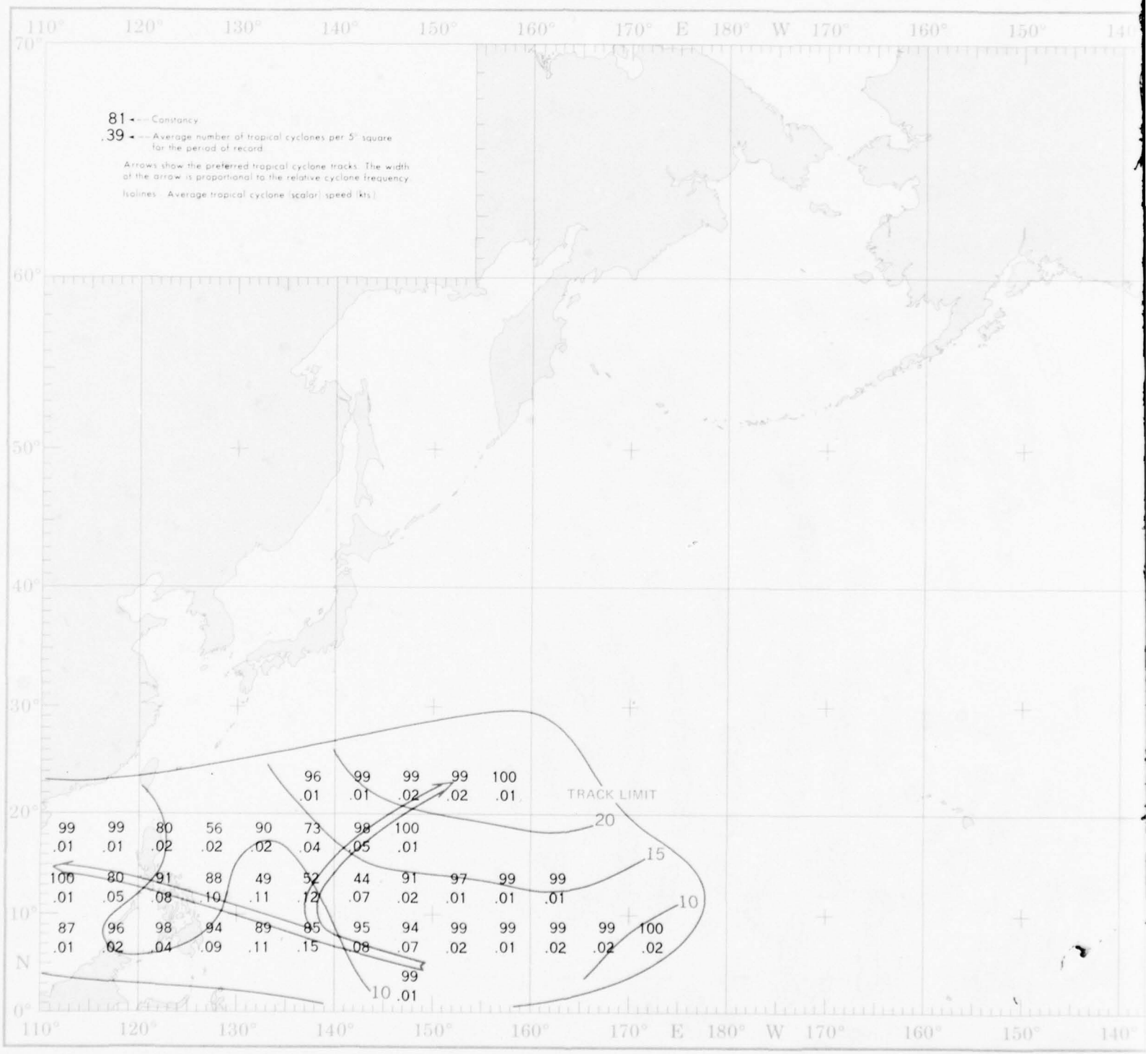
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)

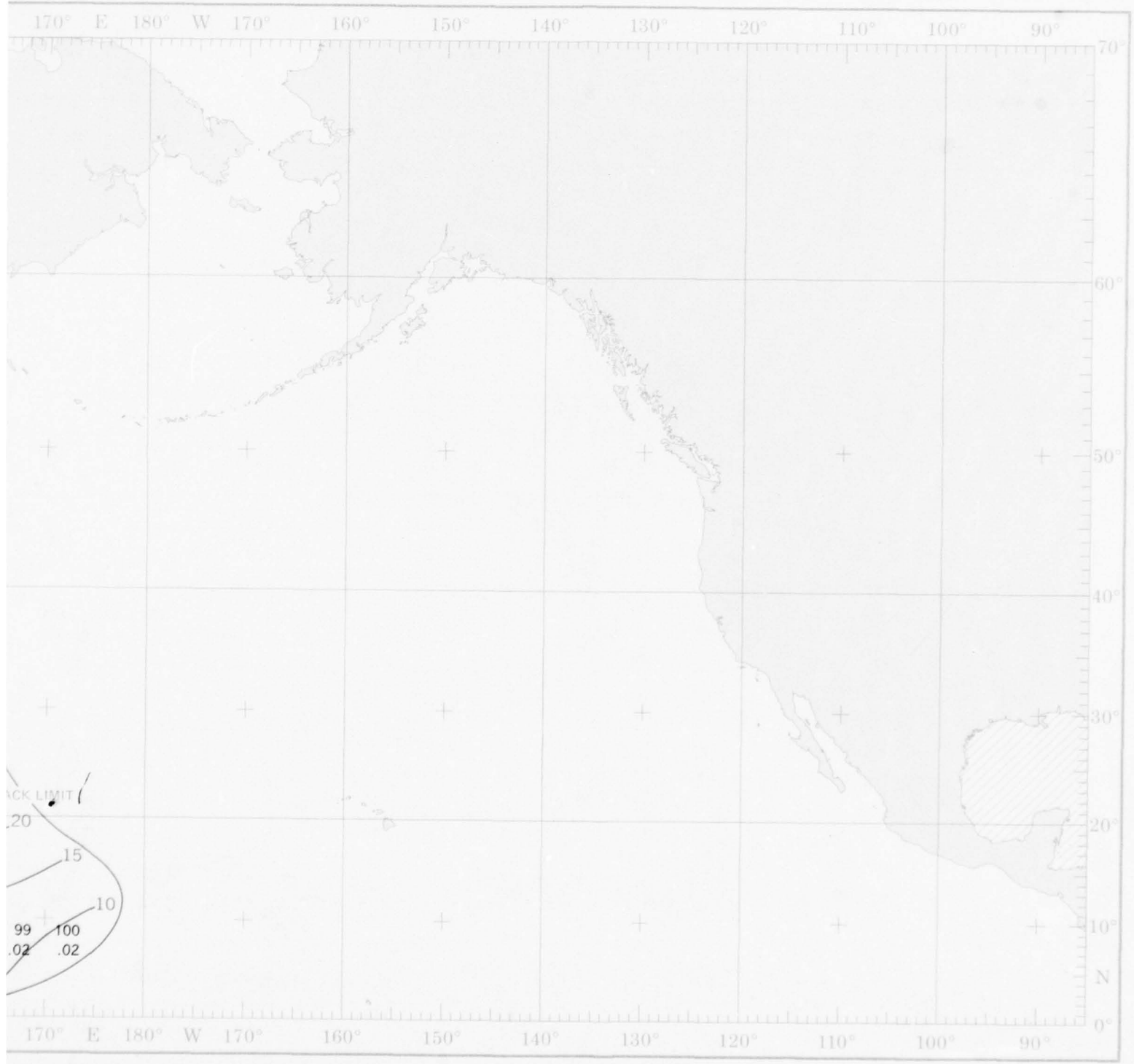
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

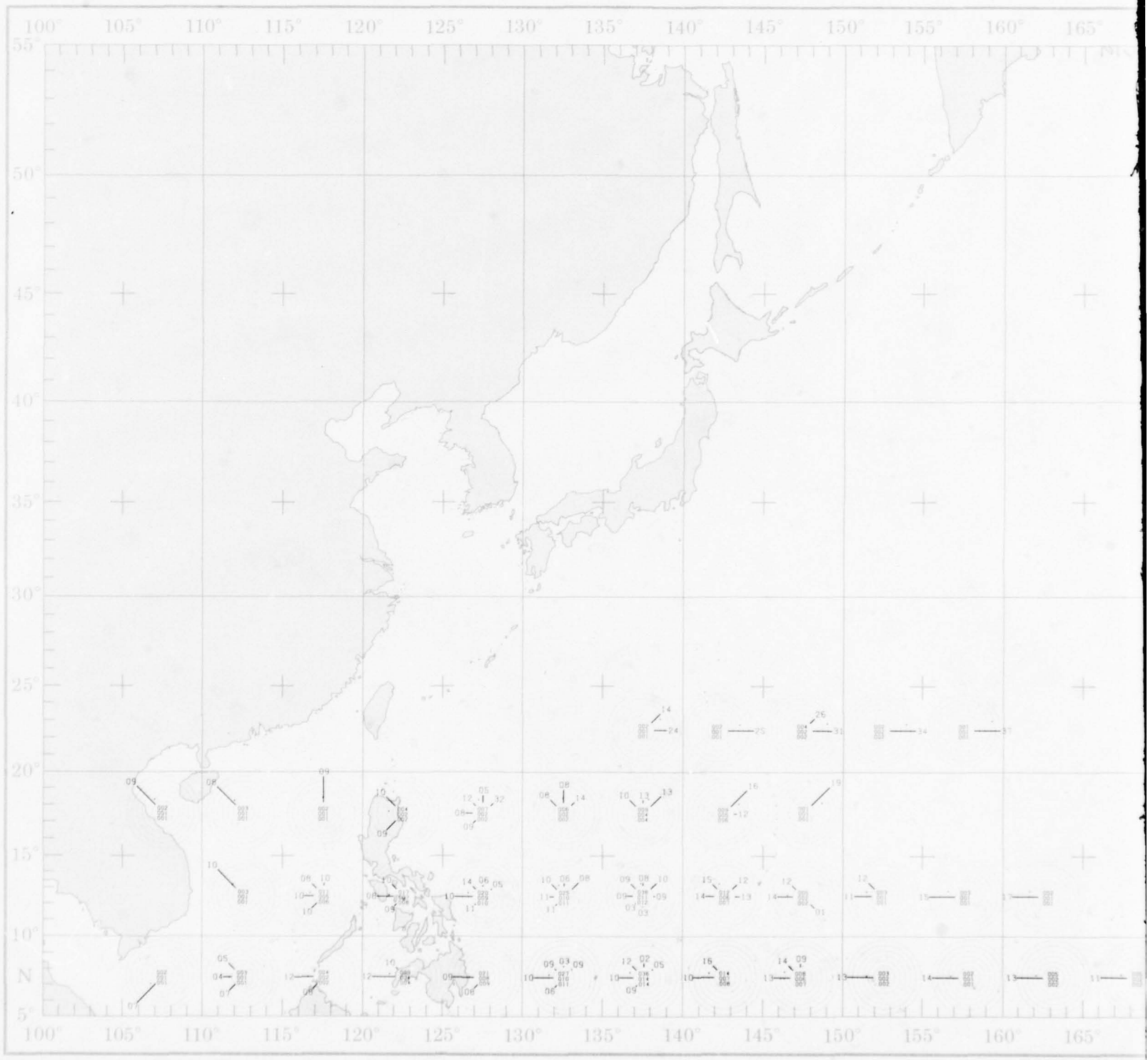


TROPICAL CYCLONE CHARACTERISTICS

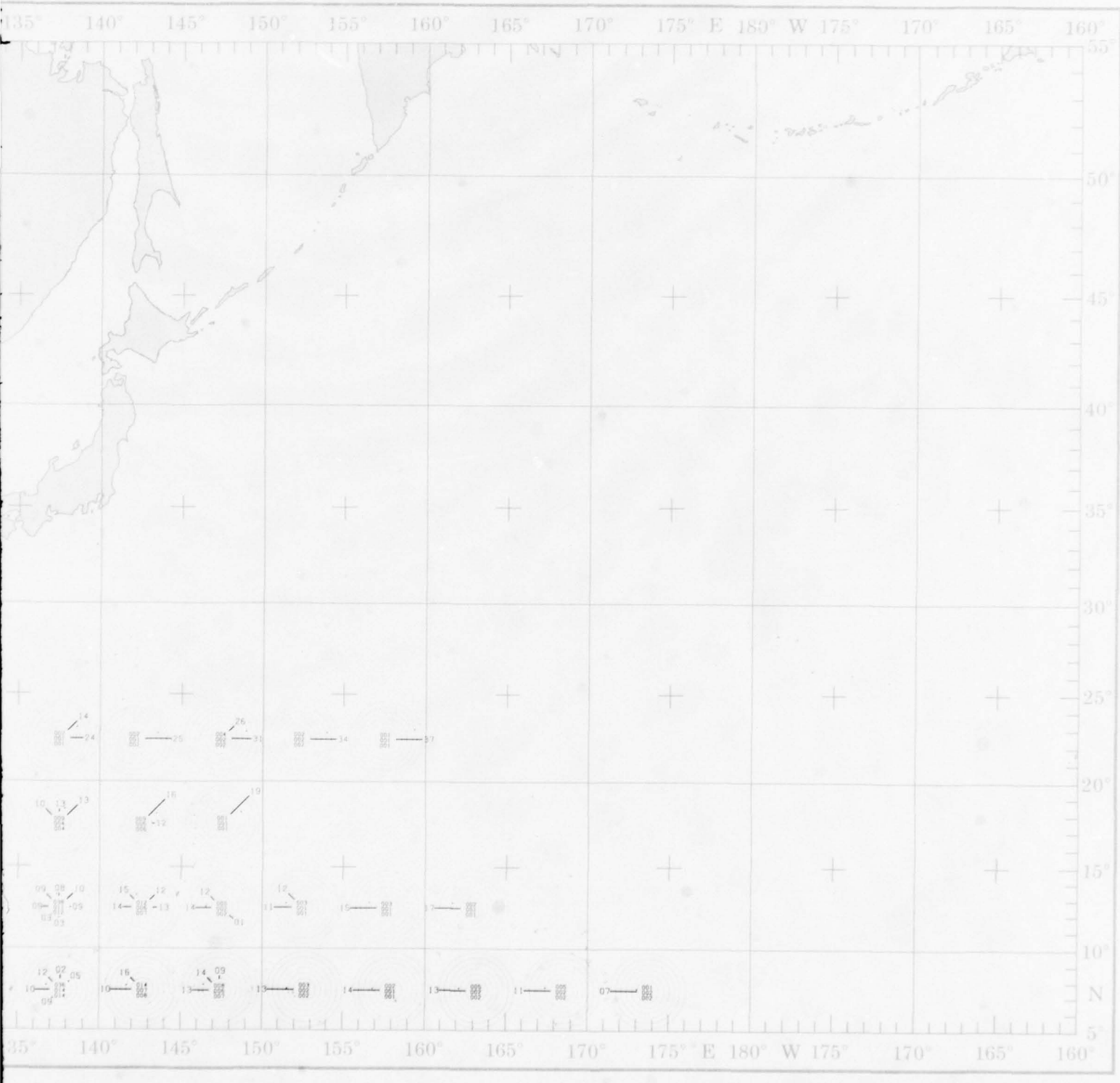



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
N
0°
ACK LIMIT
.20
15
10
99 100
.02 .02

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100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

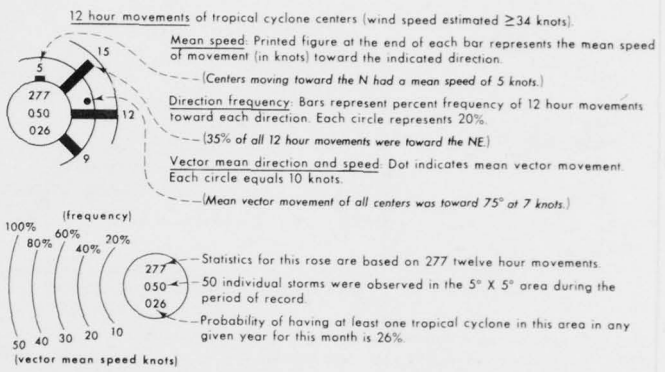
TROPICAL CYCLONE



TROPICAL CYCLONE



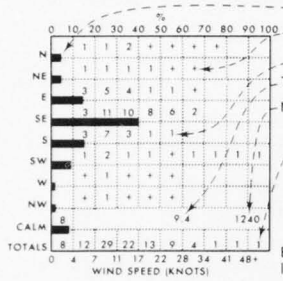
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ABLE

FEBRUARY

Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.



(4% of all winds were from the N.)

+ indicates < 5% but > 0.

(1% of all winds were from the S with a speed 22-27 knots.)

The scalar mean speed was 9.4 knots.

Number of observations.

(1% of winds from all directions had wind speed ≥48 knots.)

WIND SPEED INTERVAL (KNOTS)

| 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48 |

0 4 7 11 17 22 28 34 41 48+

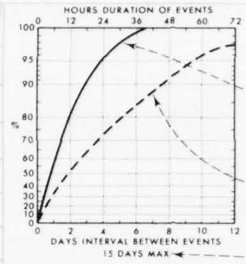
Printed scale on bottom of chart

Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots

SURFACE WINDS



Hours duration of gales - Days interval between gales.

Cumulative percent frequency of hours duration of gales equal to or less than the number of hours intersected by the solid curve refers to the top scale.

(98% of gales had a duration ≤30 hours.)

Cumulative percent frequency of days interval between gales equal to or less than the number of days intersected by the broken curve refers to the bottom scale.

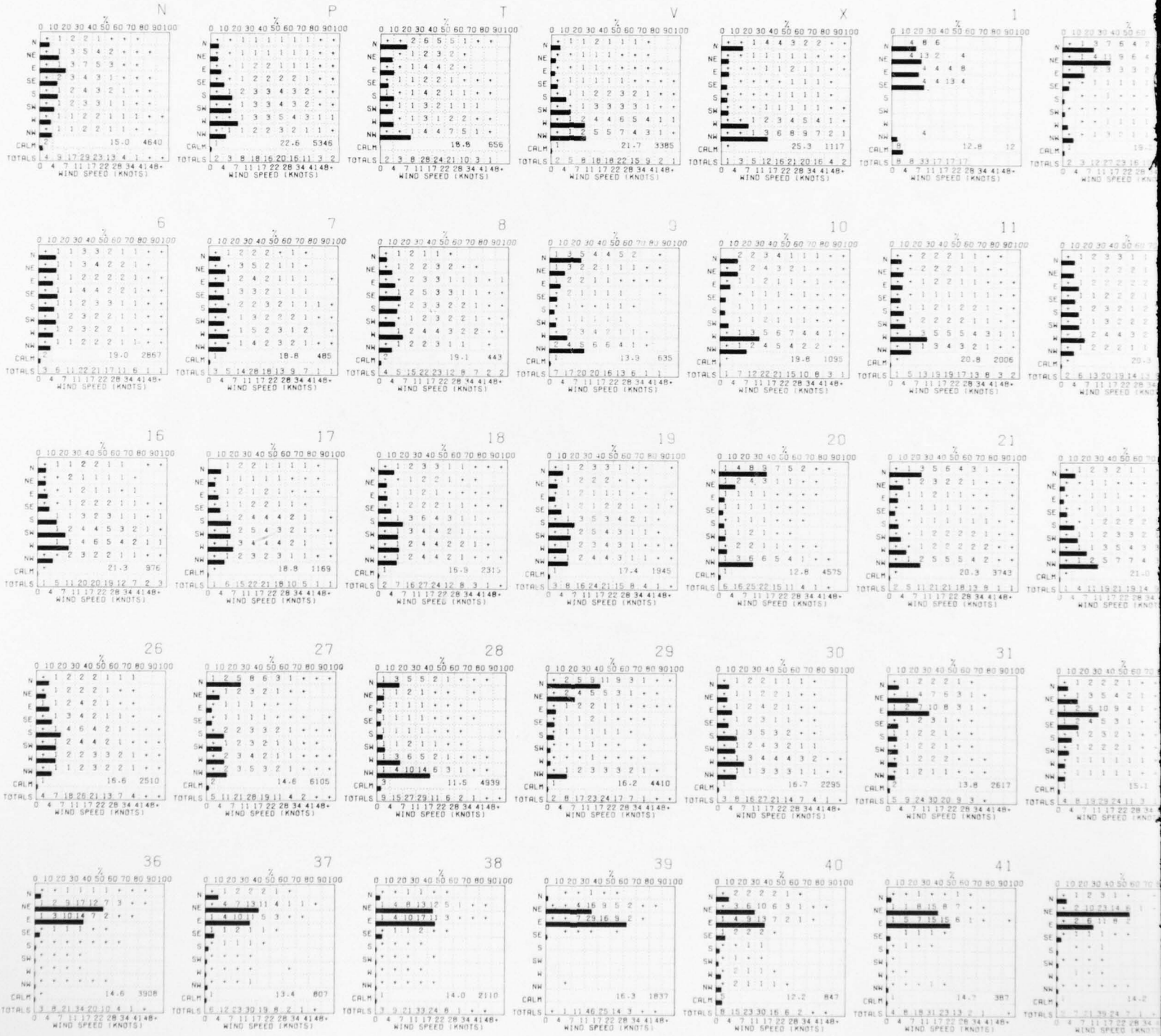
(88% of gales were followed by another gale in 7 days or less.)

Top and bottom scales are variable.
The maximum value(s) of hours duration and/or days interval will be displayed below the graph when the graph limits are exceeded.

(100% of gales were followed by another gale in 15 days or less.)

Durations and intervals for a particular month extend from the time they begin (or the first of the month if already in progress) and are terminated at the actual ending time, regardless of what month that may be.

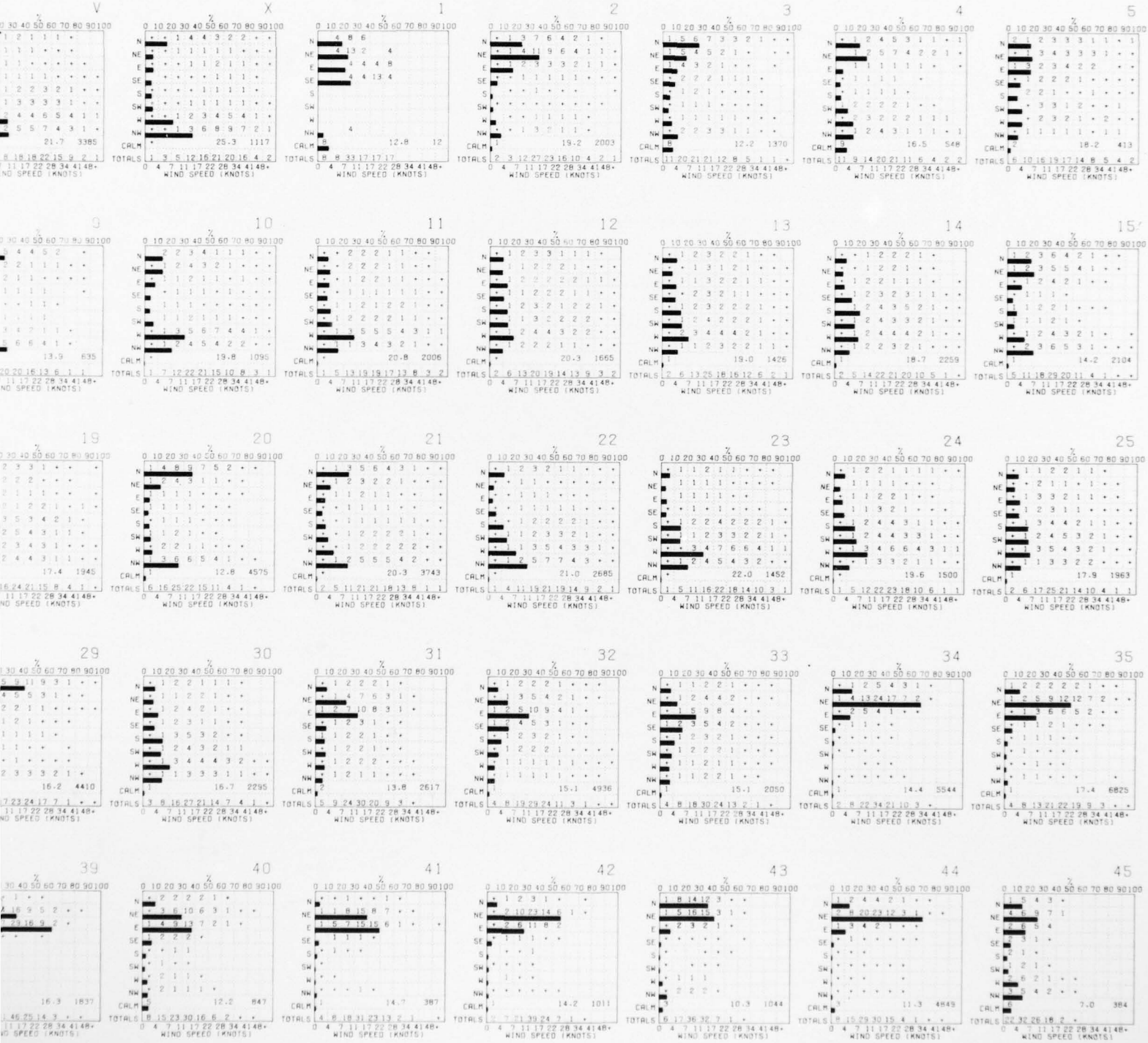
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

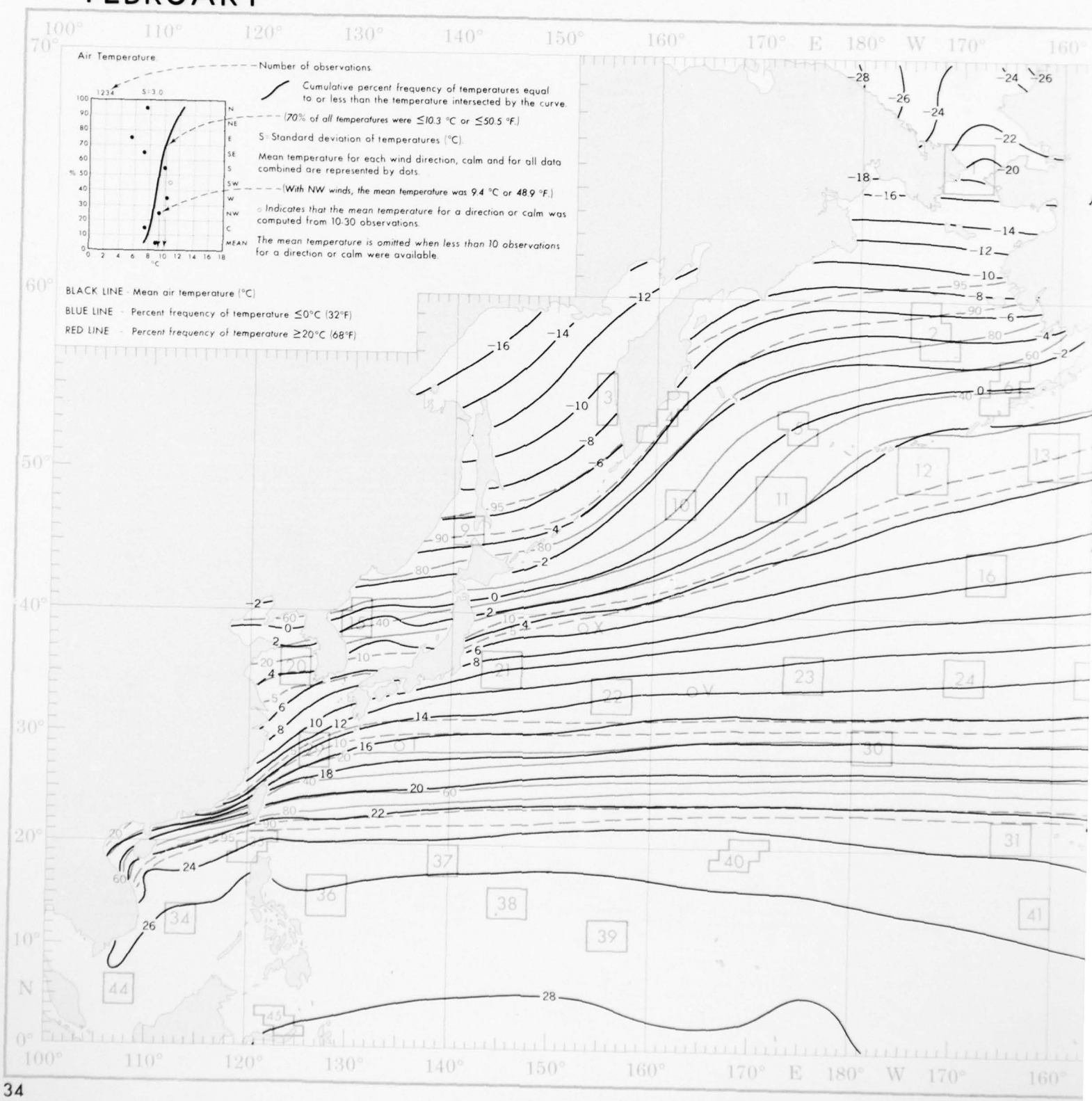
ED

FEBRUARY

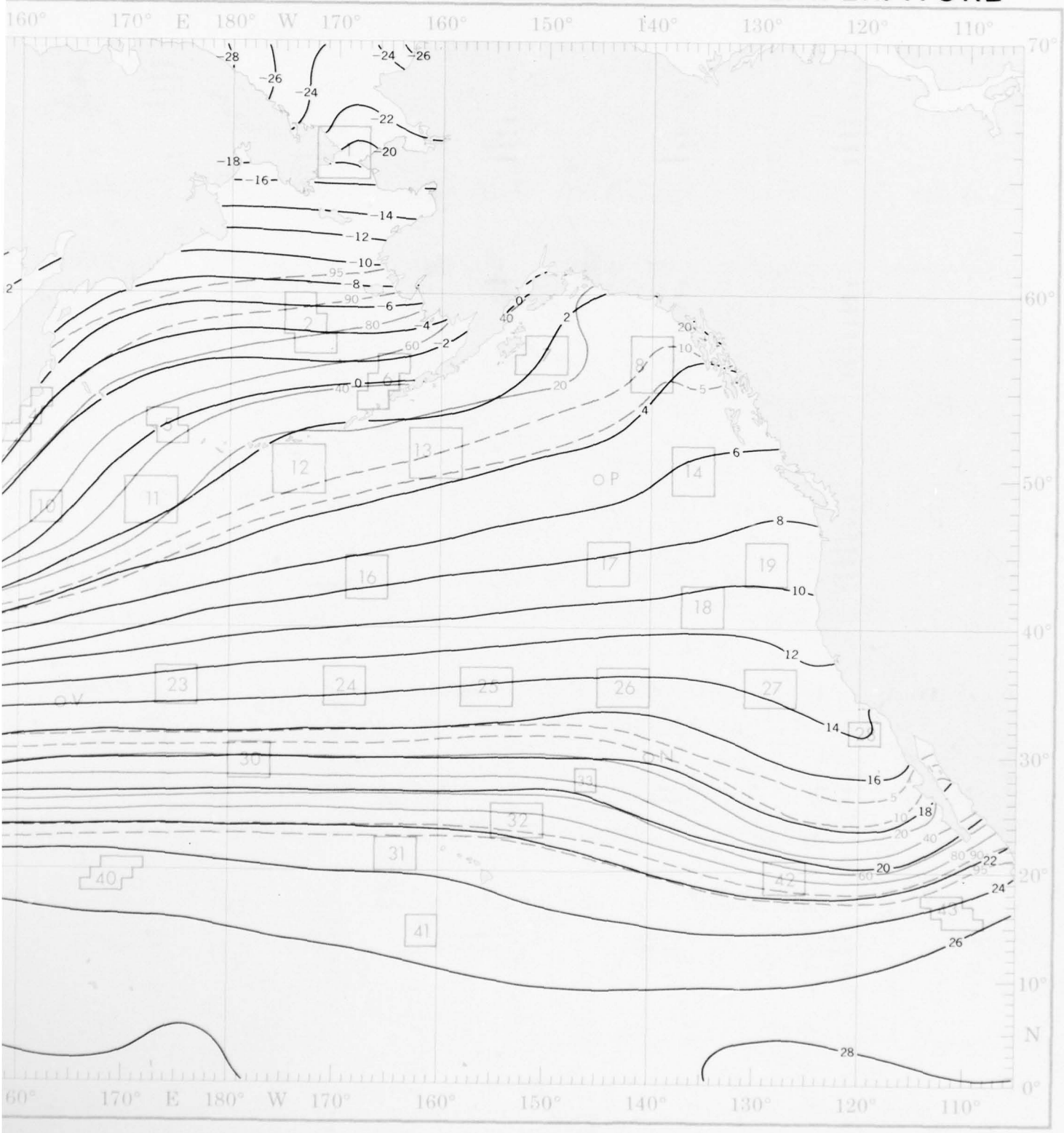


the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

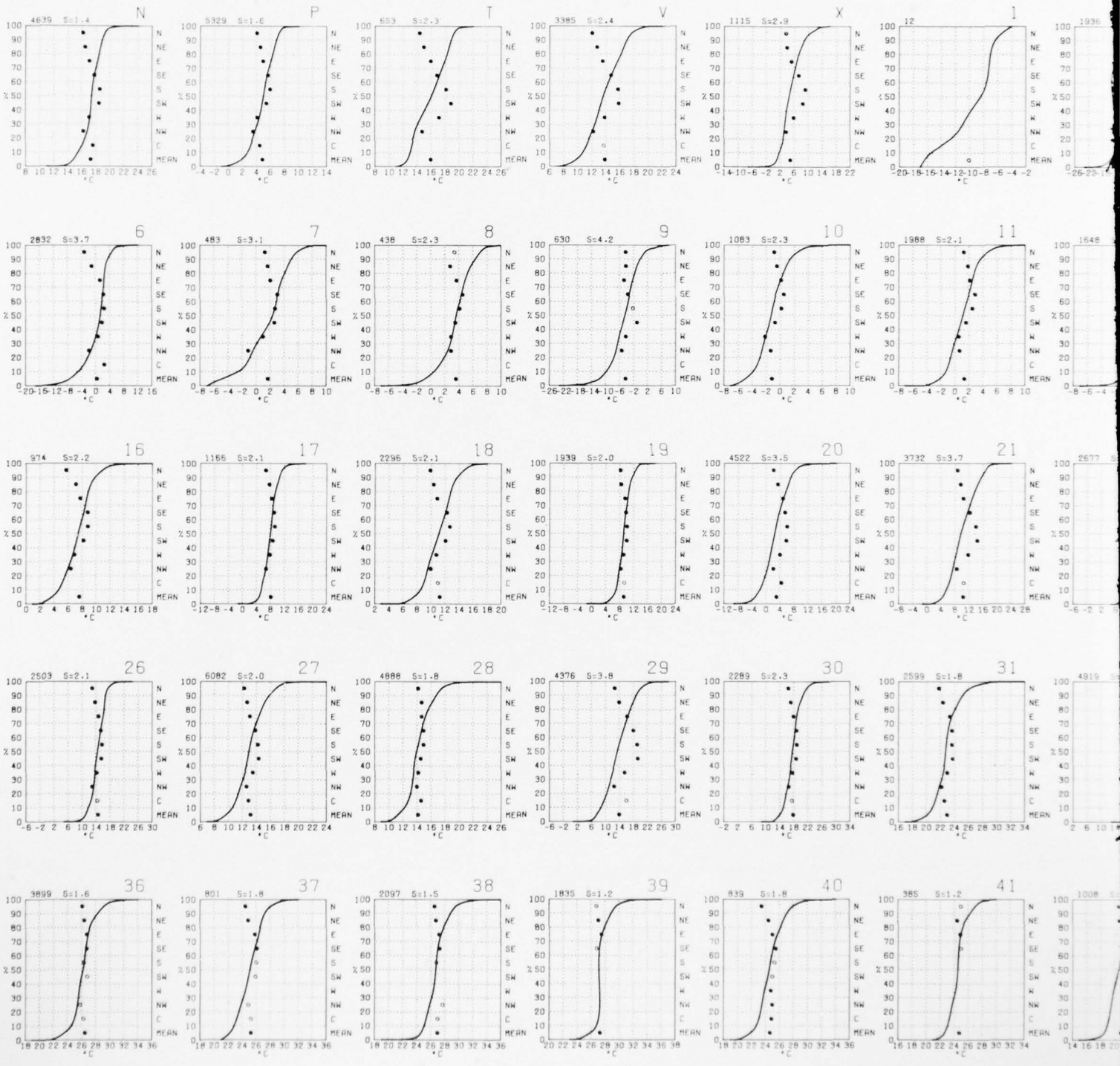
FEBRUARY


Air Temperature
Number of observations.
1234
S=3.0
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160°
70°
60°
50°
40°
30°
20°
10°
N
0°

SURFACE AIR TEMPERATURE

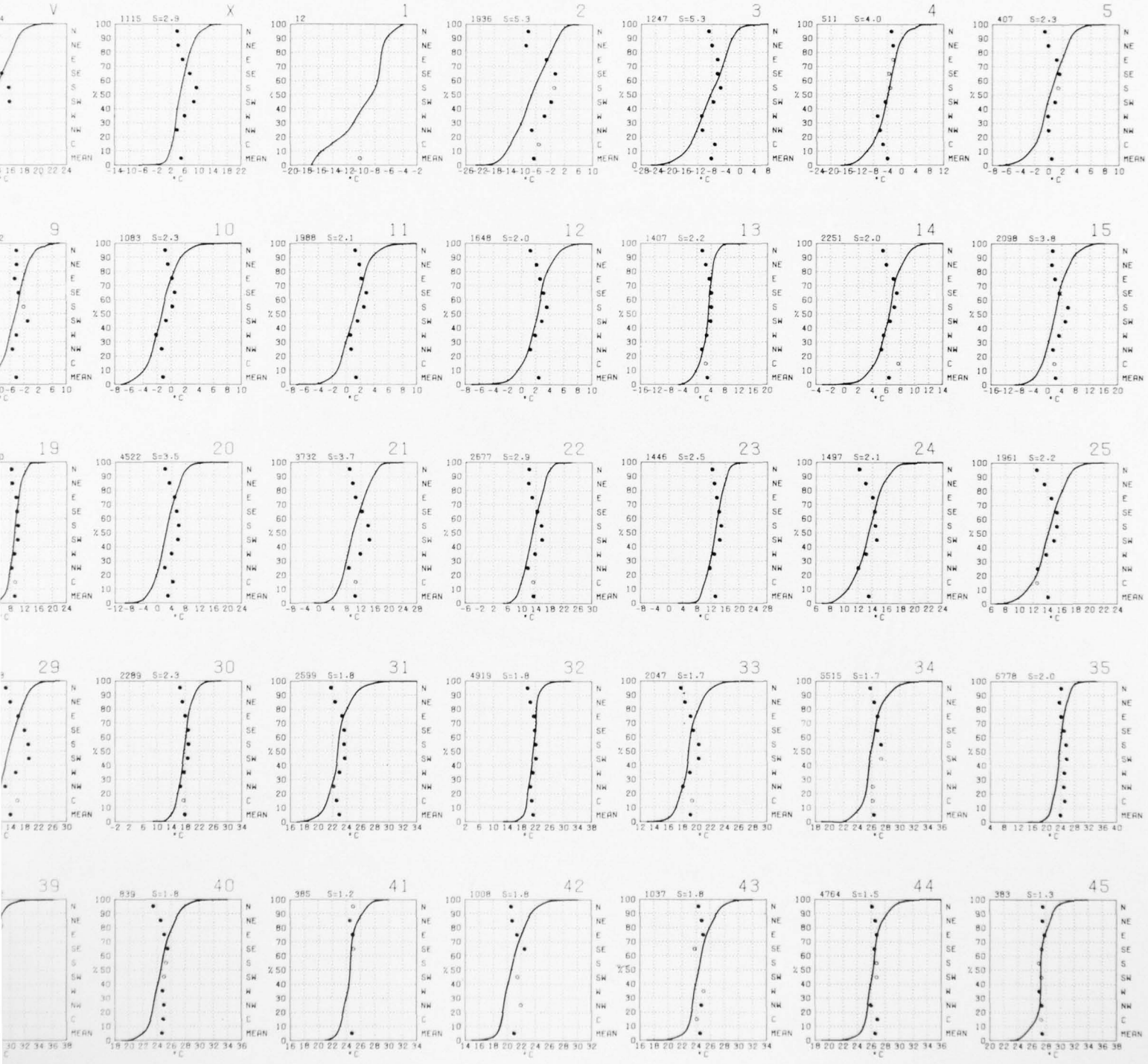


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

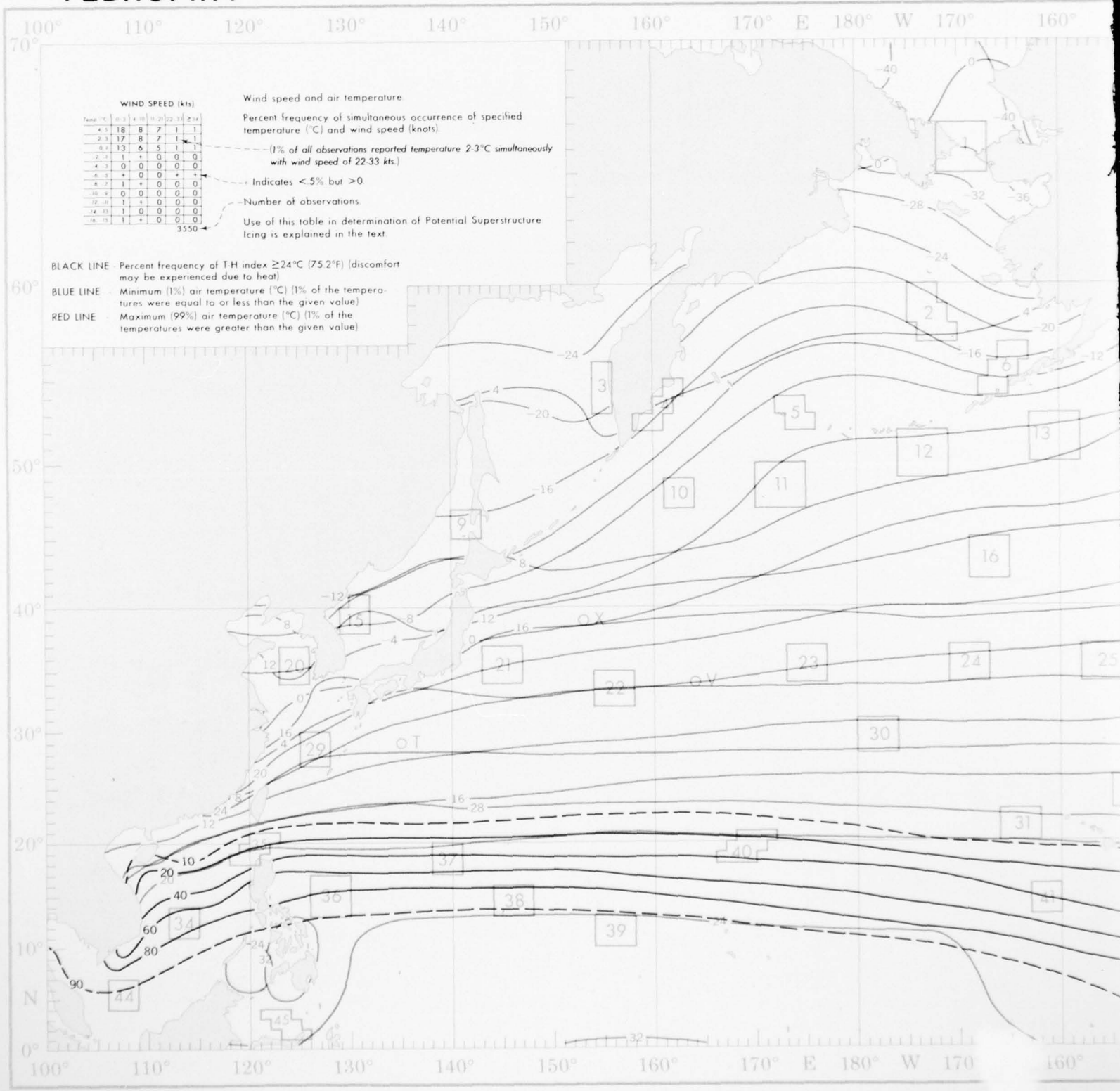
FEBRUARY



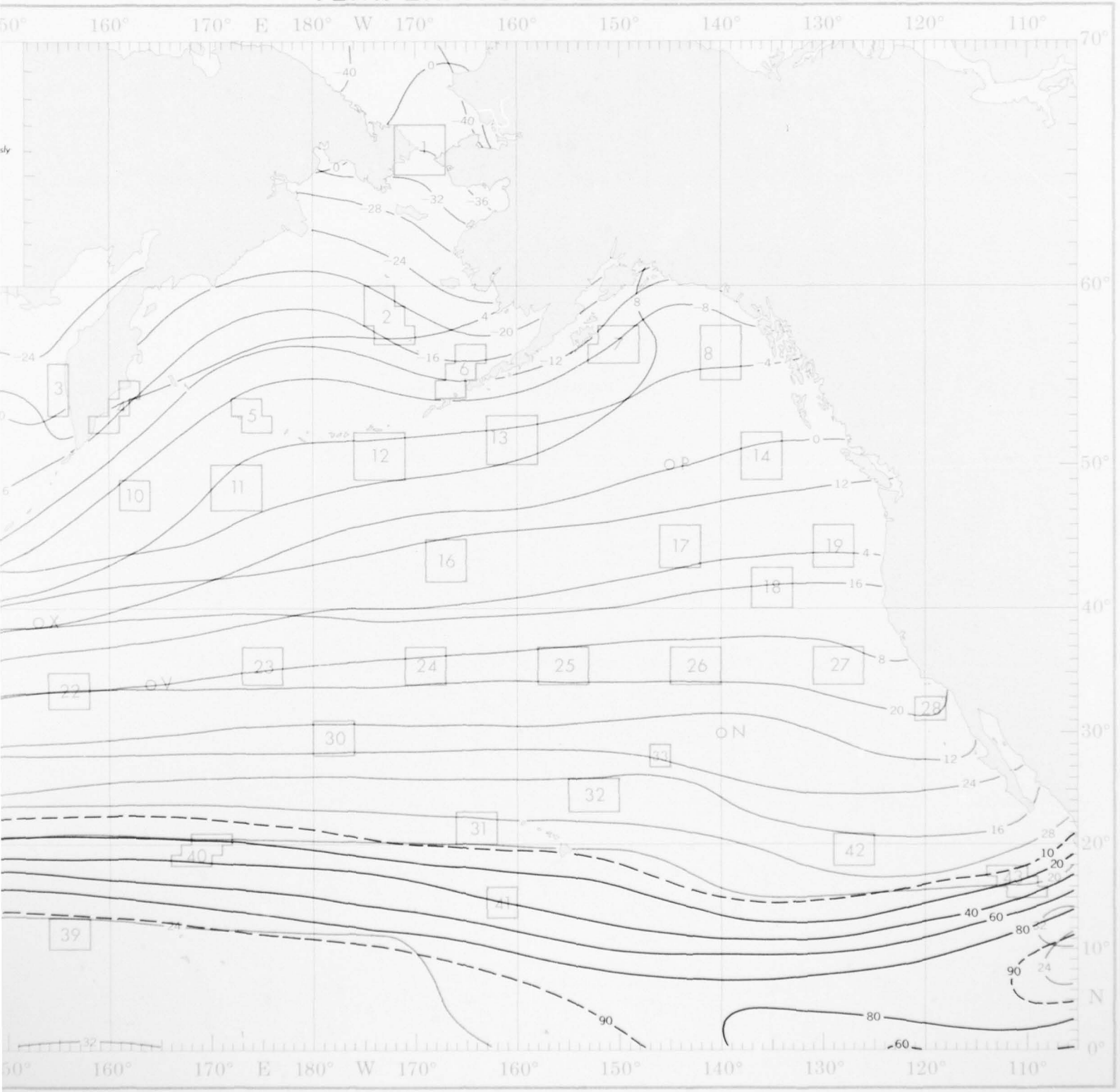
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	+	1	2	1	+
18.19	2	11	21	7	+
16.17	2	13	25	7	1
14.15	+	2	3	1	+
12.13	0	+	+	+	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

4639

P

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	1	1
6.7	1	4	13	15	6
4.5	1	6	15	14	6
2.3	1	2	5	5	3
0.1	0	+	1	1	1
-2.-1	0	+	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

5329

T

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	2	1	+
18.19	+	3	17	7	1
16.17	1	4	14	6	+
14.15	+	2	11	9	1
12.13	0	2	9	7	2
10.11	0	0	+	1	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

653

V

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	0	+	0
20.21	0	+	+	+	+
18.19	0	1	3	3	1
16.17	+	2	8	8	3
14.15	+	3	9	9	3
12.13	1	5	11	10	3
10.11	+	2	5	5	2
8.9	0	+	1	1	1
6.7	0	0	0	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3385

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	+	0
12.13	0	0	+	2	1
10.11	0	+	1	2	1
8.9	0	1	3	4	4
6.7	+	2	6	9	5
4.5	+	2	8	10	5
2.3	+	2	9	12	4
0.1	0	+	1	3	2
-2.-1	0	+	+	+	+
-4.-3	0	0	0	0	+
-6.-5	0	0	+	0	0

1115

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
-6.-5	0	0	8	0	0
-8.-7	0	8	25	0	0
-10.-9	0	17	0	0	0
-12.-11	0	8	0	8	0
-14.-13	0	0	0	8	0
-16.-15	0	8	0	0	0
-18.-17	8	0	0	0	0
-20.-19	0	0	0	0	0
-22.-21	0	0	0	0	0
-24.-23	0	0	0	0	0
-26.-25	0	0	0	0	0

12

WIND SPE					
TEMP (°C)	0-3	4-10			
4.5	0				
2.3	+				
0.1	+				
-2.-1	+				
-4.-3	+				
-6.-5	+				
-8.-7	+				
-10.-9	+				
-12.-11	+				
-14.-13	+				
<-15	+				

6

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	+	+	0	0	0
8.9	+	+	+	+	0
6.7	+	+	1	+	+
4.5	1	2	4	3	1
2.3	1	7	17	10	2
0.1	1	4	9	4	2
-2.-1	+	2	5	3	1
-4.-3	+	1	3	2	1
-6.-5	+	+	2	2	1
-8.-7	0	+	1	1	+
<-9	0	+	1	1	+

2832

7

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	+	0	0	0	0
6.7	+	2	2	2	1
4.5	1	4	10	3	4
2.3	1	4	15	9	2
0.1	1	5	8	3	1
-2.-1	0	3	7	1	+
-4.-3	+	+	2	2	1
-6.-5	0	+	1	1	1
-8.-7	0	0	+	1	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

483

8

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	1	1	0
6.7	1	3	9	5	2
4.5	1	7	16	5	3
2.3	1	8	13	6	4
0.1	+	1	4	2	2
-2.-1	+	+	2	1	+
-4.-3	0	+	+	+	0
-6.-5	0	+	+	0	0
-8.-7	0	0	0	+	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

438

9

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	+	+	+	+	0
4.5	0	0	1	+	0
2.3	0	2	1	1	+
0.1	1	4	3	1	+
-2.-1	1	7	5	3	+
-4.-3	1	9	7	3	+
-6.-5	3	8	8	3	+
-8.-7	1	4	5	3	+
-10.-9	1	2	3	1	0
-12.-11	+	1	2	1	+
<-13	+	+	1	+	+

630

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	+	0	0
6.7	0	+	0	+	0
4.5	+	1	1	+	0
2.3	+	2	4	3	1
0.1	1	4	13	6	3
-2.-1	+	8	14	8	3
-4.-3	+	5	9	6	3
-6.-5	0	+	1	1	2
-8.-7	0	+	0	+	+
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1083

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	+	0	0
8.9	0	+	+	0	+
6.7	+	+	1	+	+
4.5	+	3	4	4	1
2.3	1	6	13	10	4
0.1	1	6	13	9	4
-2.-1	+	3	6	6	2
-4.-3	0	+	1	1	1
-6.-5	0	0	+	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1989

WIND SPE					
TEMP (°C)	0-3	4-10			
10.11	0	+			
8.9	0	+			
6.7	+	+			
4.5	+	4			
2.3	1	5			
0.1	+	3			
-2.-1	+	1			
-4.-3	0	+			
-6.-5	0	+			
-8.-7	0	0			
-10.-9	0	0			

16

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	0	+	0	0
12.13	+	1	1	1	+
10.11	+	2	5	4	2
8.9	0	4	14	11	6
6.7	+	5	12	10	3
4.5	+	3	5	4	1
2.3	0	1	2	+	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

975

17

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	+	0
14.15	0	0	+	+	0
12.13	+	1	2	1	+
10.11	+	4	9	7	1
8.9	+	8	18	9	2
6.7	+	7	11	8	2
4.5	+	1	2	2	1
2.3	0	+	+	+	+
0.1	0	0	+	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1166

18

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	+	1	1	+	+
14.15	+	2	7	2	+
12.13	1	8	16	7	1
10.11	1	8	17	5	1
8.9	+	5	8	4	1
6.7	0	+	1	1	+
4.5	+	+	+	+	0
2.3	0	0	0	0	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2297

19

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	+	+	+	0	0
12.13	+	3	6	3	1
10.11	1	7	15	9	2
8.9	1	9	16	7	2
6.7	1	4	6	3	1
4.5	+	+	1	1	1
2.3	0	0	+	0	+
0.1	+	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1939

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	0	0	0
14.15	+	+	+	+	0
12.13	+	1	+	+	0
10.11	+	1	+	+	0
8.9	1	4	2	+	0
6.7	1	8	5	1	+
4.5	1	8	7	2	+
2.3	2	10	10	4	+
0.1	+	5	7	3	+
<-1	+	3	7	4	+

4523

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	+	0
20.21	0	+	+	+	+
18.19	+	+	1	1	1
16.17	+	1	2	4	1
14.15	+	2	4	3	1
12.13	+	3	7	4	1
10.11	+	3	8	5	1
8.9	+	3	9	6	1
6.7	+	2	7	6	1
4.5	+	1	2	2	1
<3	+	+	1	1	+

3732

WIND SPE					
TEMP (°C)	0-3	4-10			
22.23	0	+			
20.21	+	+			
18.19	+	1			
16.17	+	2			
14.15	+	4			
12.13	+	4			
10.11	+	3			
8.9	+	1			
6.7	0	0			
4.5	0	0			
2.3	0	0			

26

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	0	+	+	+	+
18.19	+	1	3	1	+
16.17	1	8	16	7	1
14.15	1	9	14	5	1
12.13	1	6	11	5	1
10.11	+	1	2	1	1
8.9	0	+	+	+	+
6.7	0	+	+	+	0
4.5	0	0	+	0	0
2.3	0	0	0	0	0

2504

27

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	+	+	+	+	+
18.19	+	1	1	+	+
16.17	1	4	6	2	+
14.15	1	8	12	4	+
12.13	2	13	20	5	1
10.11	1	5	8	3	+
8.9	+	1	1	1	+
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

6088

28

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	0	0	+	0	0
22.23	+	+	+	0	0
20.21	+	+	+	0	0
18.19	+	2	1	+	0
16.17	2	10	8	1	0
14.15	3	17	15	3	+
12.13	3	12	14	3	+
10.11	+	1	2	1	+
8.9	0	+	+	0	+
6.7	0	0	0	0	0

4893

29

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	+	0
24.25	0	+	+	0	0
22.23	+	+	+	+	+
20.21	+	2	3	1	+
18.19	1	4	5	1	+
16.17	+	5	8	3	+
14.15	+	4	9	4	+
12.13	+	4	10	5	+
10.11	+	3	6	5	+
8.9	+	2	4	3	+
<7	+	+	1	1	+

4379

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	+	0	0
24.25	+	+	+	0	0
22.23	+	1	2	1	0
20.21	+	4	9	2	+
18.19	1	9	18	7	1
16.17	1	7	13	7	2
14.15	+	2	4	3	1
12.13	0	+	1	1	+
10.11	0	0	+	+	0
8.9	0	0	0	0	0

2291

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	+	1	1	+	0
26.27	+	3	3	+	0
24.25	1	8	13	2	+
22.23	3	16	25	6	+
20.21	1	5	8	3	+
18.19	+	+	1	+	+
16.17	0	0	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2600

WIND SPEE					
TEMP (°C)	0-3	4-10			
30.31	0	0			
28.29	0	+			
26.27	+	1			
24.25	+	2			
22.23	1	12			
20.21	1	10			
18.19	+	3			
16.17	0	+			
14.15	0	0			
12.13	0	0			
10.11	0	0			

36

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	+	1	0	0
30.31	+	2	2	+	0
28.29	1	5	10	1	+
26.27	1	17	31	7	+
24.25	+	5	9	4	+
22.23	+	+	1	1	+
20.21	0	0	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

3899

37

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	1	+	0	0
28.29	+	4	3	+	0
26.27	3	16	18	3	+
24.25	2	10	19	4	+
22.23	1	3	7	2	1
20.21	0	+	1	+	+
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

802

38

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	+	+	0
30.31	+	2	2	+	0
28.29	1	10	16	2	0
26.27	2	15	33	6	+
24.25	+	2	6	1	+
22.23	+	0	+	+	0
20.21	+	+	0	0	0
18.19	0	+	0	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2097

39

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	1	0	0
30.31	+	+	3	1	0
28.29	+	4	20	7	0
26.27	0	7	46	9	+
24.25	0	+	1	+	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1835

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	+	1	0	0
28.29	1	2	3	+	0
26.27	3	11	12	1	0
24.25	3	18	19	3	+
22.23	1	5	11	3	+
20.21	+	1	1	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

839

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	2	1	0
26.27	1	6	15	3	0
24.25	2	15	32	10	+
22.23	1	4	6	1	1
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

386

WIND SPE					
TEMP (°C)	0-3	4-10			
28.29	0	+			
26.27	+	1			
24.25	+	3			
22.23	1	9			
20.21	+	11			
18.19	1	4			
16.17	0	+			
14.15	0	0			
12.13	0	0			
10.11	0	0			
8.9	0	0			

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

MPERATURE

FEBRUARY

V

WIND SPEED (KTS)

°C	0-3	4-10	11-21	22-33	≥ 34
.23	0	0	0	+	0
.21	0	+	+	+	+
.19	0	1	3	3	1
.17	+	2	8	8	3
.15	+	3	9	9	3
.13	1	5	11	10	3
.11	+	2	5	5	2
8.9	0	+	1	1	1
6.7	0	0	0	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3385

X

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	+	0
12.13	0	0	+	2	1
10.11	0	+	1	2	1
8.9	0	1	3	4	4
6.7	+	2	6	9	5
4.5	+	2	8	10	5
2.3	+	2	9	12	4
0.1	0	+	1	3	2
-2.-1	0	+	+	+	+
-4.-3	0	0	0	0	+
-6.-5	0	0	+	0	+

1115

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
-6.-5	0	0	8	0	0
-8.-7	0	8	25	0	0
-10.-9	0	17	0	0	0
-12.-11	0	8	0	8	0
-14.-13	0	0	0	8	0
-16.-15	0	8	0	0	0
-18.-17	8	0	0	0	0
-20.-19	0	0	0	0	0
-22.-21	0	0	0	0	0
-24.-23	0	0	0	0	0
-26.-25	0	0	0	0	0

12

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	+	+	+	0
2.3	+	1	2	1	1
0.1	+	1	4	3	1
-2.-1	+	2	5	2	1
-4.-3	+	2	5	2	1
-6.-5	+	2	6	4	1
-8.-7	+	2	8	4	1
-10.-9	+	2	8	3	1
-12.-11	+	1	6	3	+
-14.-13	+	1	4	2	+
≤-15	+	1	4	2	+

1936

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	+	+	0
6.7	0	0	0	0	0
4.5	+	+	+	0	0
2.3	+	+	+	0	0
0.1	+	2	1	+	0
-2.-1	1	4	2	1	+
-4.-3	2	9	3	2	+
-6.-5	2	7	4	2	+
-8.-7	1	4	4	1	+
-10.-9	1	4	4	3	+
≤-11	3	11	13	5	1

1247

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	+	0	0	0	0
8.9	0	0	0	0	0
6.7	0	+	0	0	0
4.5	+	+	2	+	+
2.3	+	1	1	1	+
0.1	1	3	3	3	1
-2.-1	2	6	12	3	3
-4.-3	2	4	9	4	2
-6.-5	2	4	8	2	1
-8.-7	1	3	3	2	1
≤-9	3	4	3	3	1

511

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	+	1	+	0
4.5	1	3	2	1	0
2.3	1	7	11	8	1
0.1	2	6	10	6	4
-2.-1	2	8	9	6	3
-4.-3	+	1	3	1	1
-6.-5	0	+	1	+	0
-8.-7	0	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

407

9

WIND SPEED (KTS)

°C	0-3	4-10	11-21	22-33	≥ 34
.7	+	+	+	+	0
.5	0	0	1	+	0
.3	0	2	1	1	+
.1	1	4	3	1	+
1	1	7	5	3	+
.3	1	9	7	3	+
.5	3	8	8	3	+
.7	1	4	5	3	+
.9	1	2	3	1	0
1	+	1	2	1	+
3	+	+	1	+	+

630

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	+	0	0
6.7	0	+	0	+	0
4.5	+	1	1	+	0
2.3	+	2	4	3	1
0.1	1	4	13	6	3
-2.-1	+	8	14	8	3
-4.-3	+	5	9	6	3
-6.-5	0	+	1	1	2
-8.-7	0	+	0	+	+
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1083

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	0
8.9	0	+	+	0	+
6.7	+	1	2	2	1
4.5	+	3	4	4	1
2.3	1	6	13	10	4
0.1	1	6	13	9	4
-2.-1	+	3	6	6	2
-4.-3	0	+	1	1	1
-6.-5	0	0	+	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

1989

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	0
8.9	0	+	+	+	+
6.7	+	1	2	2	1
4.5	+	4	8	7	3
2.3	1	8	17	11	5
0.1	+	5	8	5	2
-2.-1	+	1	3	2	1
-4.-3	0	+	+	+	+
-6.-5	0	+	+	+	0
-8.-7	0	0	+	0	0
-10.-9	0	0	0	0	0

1648

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	0	0
10.11	0	+	+	0	0
8.9	+	+	1	0	0
6.7	+	3	3	2	1
4.5	1	6	15	11	3
2.3	1	8	16	9	3
0.1	+	3	5	3	1
-2.-1	+	1	2	1	+
-4.-3	0	+	1	1	+
-6.-5	0	0	0	+	+
-8.-7	0	0	0	0	0

1407

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	+	+	+
10.11	+	1	2	1	+
8.9	1	5	10	7	1
6.7	1	8	19	13	2
4.5	+	4	9	7	1
2.3	+	1	3	2	+
0.1	0	+	+	+	+
-2.-1	0	+	+	+	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

2251

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	+	+	0	0	0
12.13	0	1	1	+	+
10.11	+	1	1	+	0
8.9	+	2	3	1	+
6.7	1	2	5	1	0
4.5	1	4	8	2	+
2.3	1	7	13	4	+
0.1	1	7	9	2	+
-2.-1	1	4	6	2	+
≤-3	+	2	4	3	+

2098

19

WIND SPEED (KTS)

)	0-3	4-10	11-21	22-33	≥ 34
2	0	+	+	0	0
5	+	+	+	0	0
3	+	3	6	3	1
1	1	7	15	9	2
9	1	9	16	7	2
7	1	4	6	3	1
5	+	+	1	1	1
3	0	0	+	0	+
1	+	0	0	0	0
1	0	0	0	0	0
9	0	0	0	0	0

1939

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	+	+	0
14.15	+	+	+	+	0
12.13	+	1	+	+	0
10.11	+	1	+	+	0
8.9	1	4	2	+	0
6.7	1	8	5	1	+
4.5	1	8	7	2	+
2.3	2	10	10	4	+
0.1	+	5	7	3	+
≤-1	+	3	7	4	+

4523

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	+	0
20.21	0	+	+	+	0
18.19	+	+	1	1	1
16.17	+	1	2	4	1
14.15	+	2	4	3	1
12.13	+	3	7	4	1
10.11	+	3	8	5	1
8.9	+	3	9	6	1
6.7	+	2	7	6	1
4.5	+	1	2	2	1
≤3	+	+	1	1	+

3732

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	+	+
20.21	+	+	1	+	0
18.19	+	1	3	3	2
16.17	+	2	7	7	2
14.15	+	4	8	6	2
12.13	+	4	11	7	2
10.11	+	3	7	6	2
8.9	+	1	3	3	2
6.7	0	0	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2677

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	0	+	+
20.21	0	+	0	+	0
18.19	0	1	2	1	+
16.17	+	3	7	6	3
14.15	+	4	11	8	3
12.13	+	5	11	8	4
10.11	+	3	6	7	3
8.9	0	+	2	2	1
6.7	0	0	+	+	+
4.5	0	0	+	0	0
2.3	0	0	0	0	0

1447

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	+	+	+	0
18.19	0	1	1	+	+
16.17	+	3	9	4	+
14.15	+	7	16	8	3
12.13	+	5	13	9	3
10.11	+	2	4	5	2
8.9	0	+	1	1	1
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1497

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	0
18.19	+	2	3	1	+
16.17	1	6	12	5	2
14.15	1	7	15	7	2
12.13	+	6	11	7	1
10.11	+	2	4	3	1
8.9	+	+	+	1	+
6.7	0	0	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1961

29

WIND SPEED (KTS)

	0-3	4-10	11-21	22-33	≥ 34
7	0	+	+	+	0
5	0	+	+	0	0
3	+	1	1	+	+
1	+	2	3	1	+
9	+	5	8	3	+
7	+	4	9	4	+
5	+	4	10	5	+
3	+	3	6	5	+
1	+	2	4	3	+
9	+	+	1	1	+

4379

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	+	0	0
24.25	+	+	+	0	0
22.23	+	1	2	1	0
20.21	+	4	9	2	+
18.19	1	9	18	7	1
16.17	1	7	13	7	2
14.15	+	2	4	3	1
12.13	0	+	1	1	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0

2291

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	+	+	1	+	0
26.27	+	3	3	+	0
24.25	1	8	13	2	+
22.23	3	16	25	6	+
20.21	1	5	8	3	+
18.19	+	+	1	+	+
16.17	0	0	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2600

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	+	+	0
26.27	+	1	1	+	+
24.25	+	2	4	1	+
22.23	1	12	22	6	+
20.21	1	10	19	6	1
18.19	+	3	8	2	+
16.17	0	+	1	+	+
14.15	0	+	+	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4923

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	+	0
24.25	+	+	+	+	+
22.23	1	3	3	1	+
20.21	1	7	15	4	1
18.19	2	13	28	8	+
16.17	+	3	8	2	+
14.15	0	+	+	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2047

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	+	0	0
30.31	+	1	2	+	0
28.29	+	6	9	2	0
26.27	1	15	28	6	+
24.25	1	6	14	4	+
22.23	+	+	1	1	+
20.21	0	0	+	+	0
18.18	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5515

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	+
28.29	+	2	2	+	0
26.27	2	7	8	2	+
24.25	2	9	18	10	1
22.23	+	3	11	12	1
20.21	+	+	3	4	1
18.19	0	+	+	+	+
16.17	0	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

6784

39

WIND SPEED (KTS)

	0-3	4-10	11-21	22-33	≥ 34
2	0	0	+	0	0
0	0	+	1	0	0
8	+	+	3	1	0
6	+	4	20	7	0
4	0	7	46	9	+
2	0	+	1	+	0
0	0	0	+	0	0
8	0	0	0	0	0
6	0	0	0	0	0
4	0	0	0	0	0
2	0	0	0	0	0

1835

40

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	+	1	0	0
28.29	1	2	3	+	0
26.27	3	11	12	1	0
24.25	3	18	19	3	+
22.23	1	5	11	3	+
20.21	+	1	1	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

839

41

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	2	1	0
26.27	1	6	15	3	0
24.25	2	15	32	10	+
22.23	1	4	6	1	1
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

386

42

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	1	1	+	0
24.25	+	3	4	+	0
22.23	1	9	14	1	0
20.21	+	11	30	4	0
18.19	1	4	12	2	+
16.17	0	+	1	+	0
14.15	0	0	0	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1010

43

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	1	0	0
28.29	1	3	2	0	0
26.27	1	15	9	+	0
24.25	3	22	17	1	0
22.23	2	12	10	+	0
20.21	0	1	1	+	0
18.19	0	+	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1040

44

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	+	+	+	0	0
30.31	+	1	2	+	0
28.29	2	8	8	1	+
26.27	5	25	25	3	+
24.25	1	7	9	1	+
22.23	+	+	+	+	0
20.21	+	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

4765

45

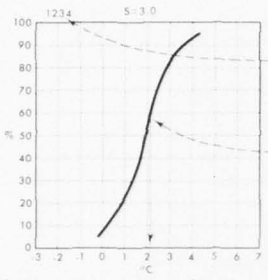
WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	1	0	+	0	0
30.31	1	3	2	0	0
28.29	10	21	8	0	0
26.27	11	32	9	0	0
24.25	1	3	0	0	0
22.23	0	0	0	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

385

ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY



Sea surface temperature

Number of observations

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve

(60% of all observed sea surface temperatures were ≤21°C or ≤35.8°F.)

S: Standard deviation of sea surface temperatures (°C)

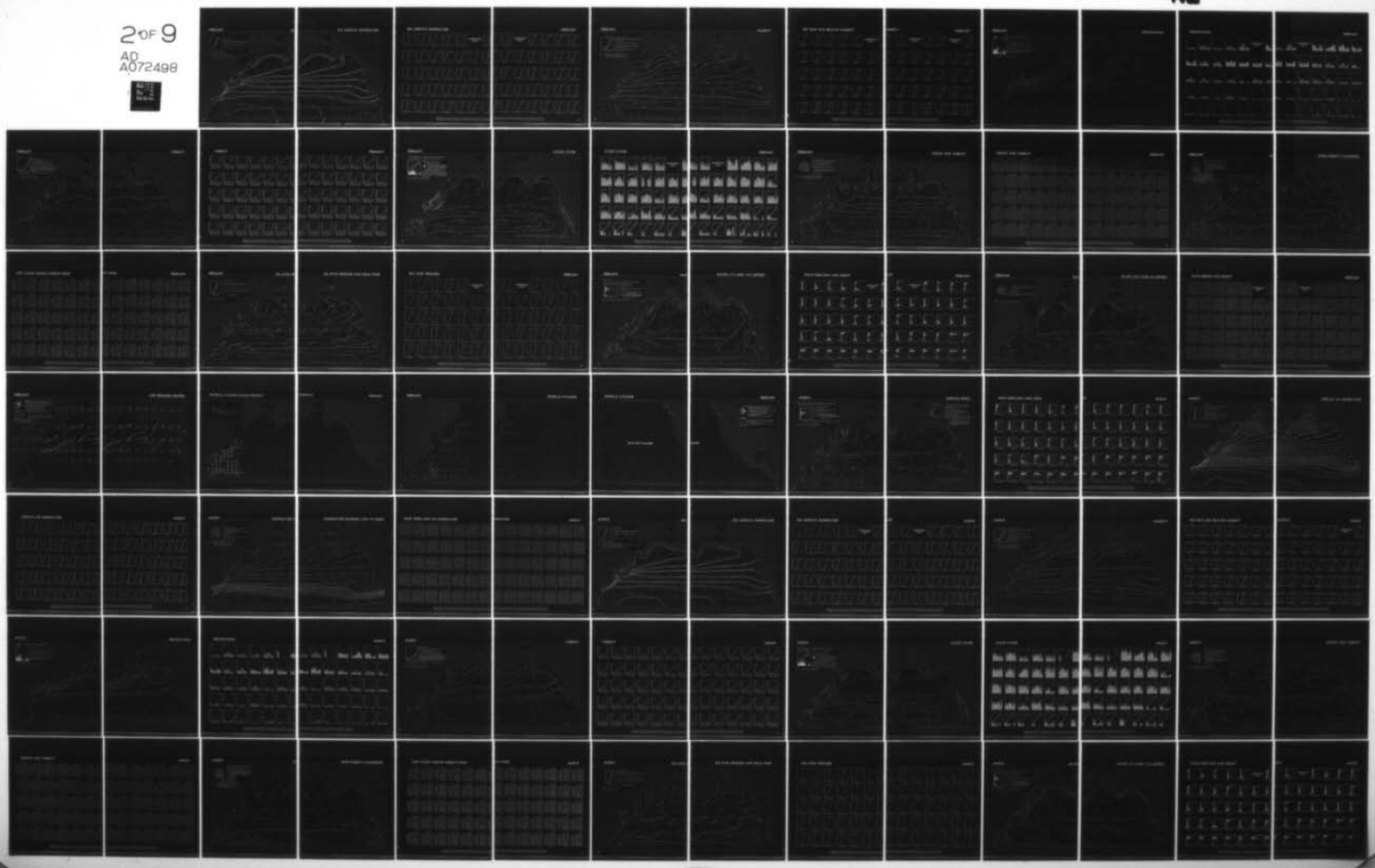
BLACK LINE – Mean sea surface temperature (°C)

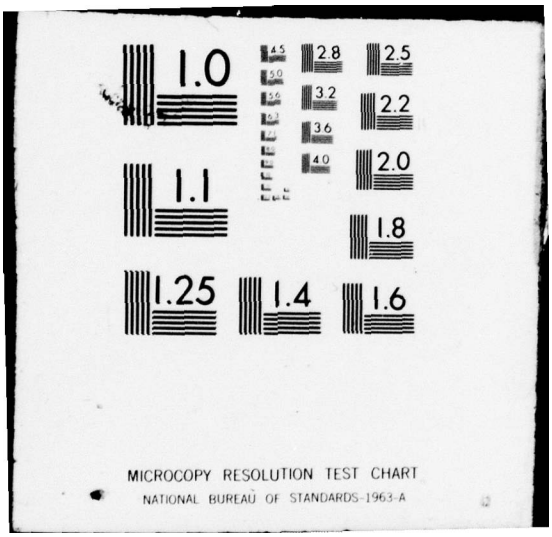
BLUE LINE – Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE – Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

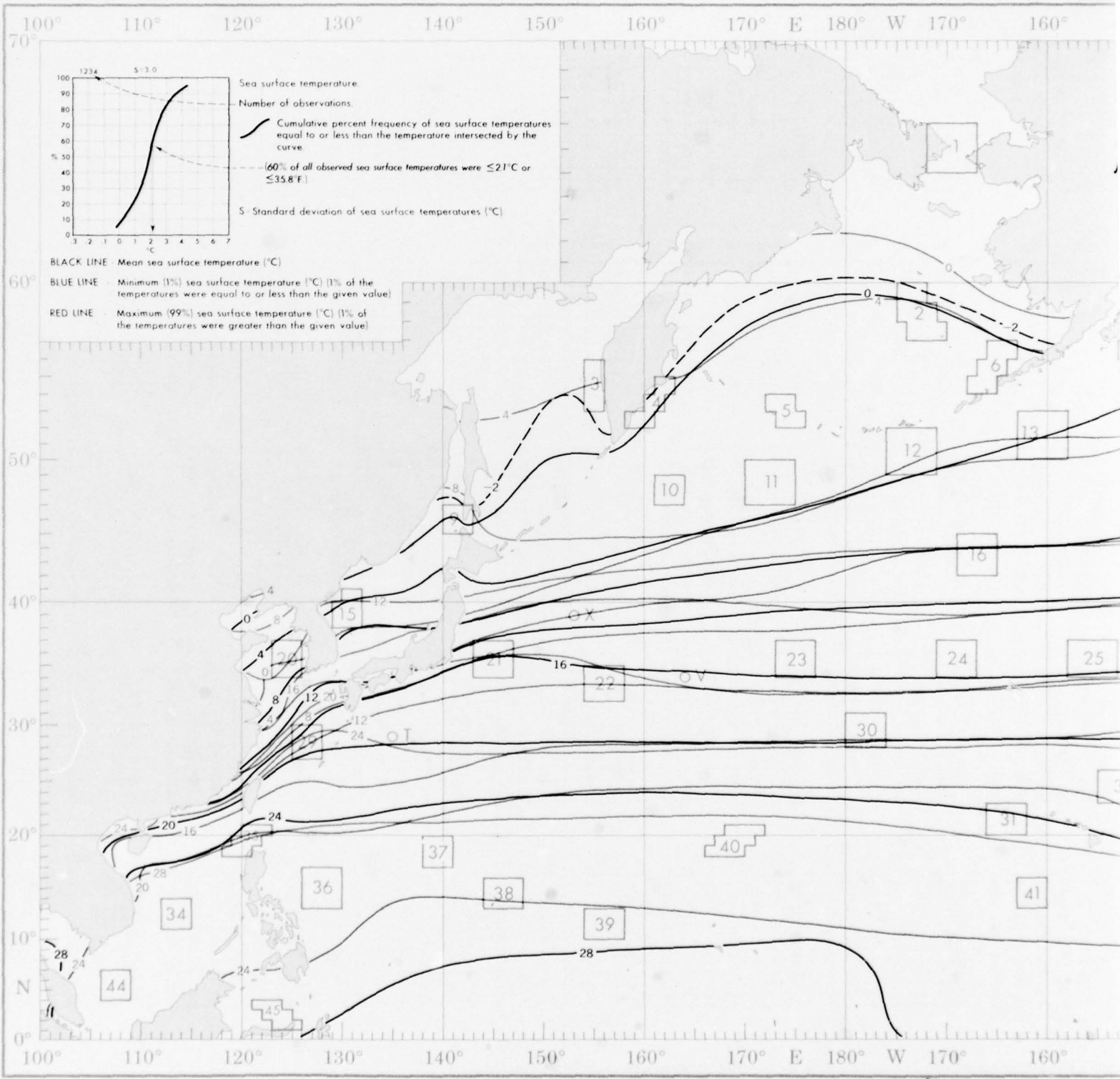
AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
MAR 77
UNCLASSIFIED NAVAIR-50-1C-529 NL

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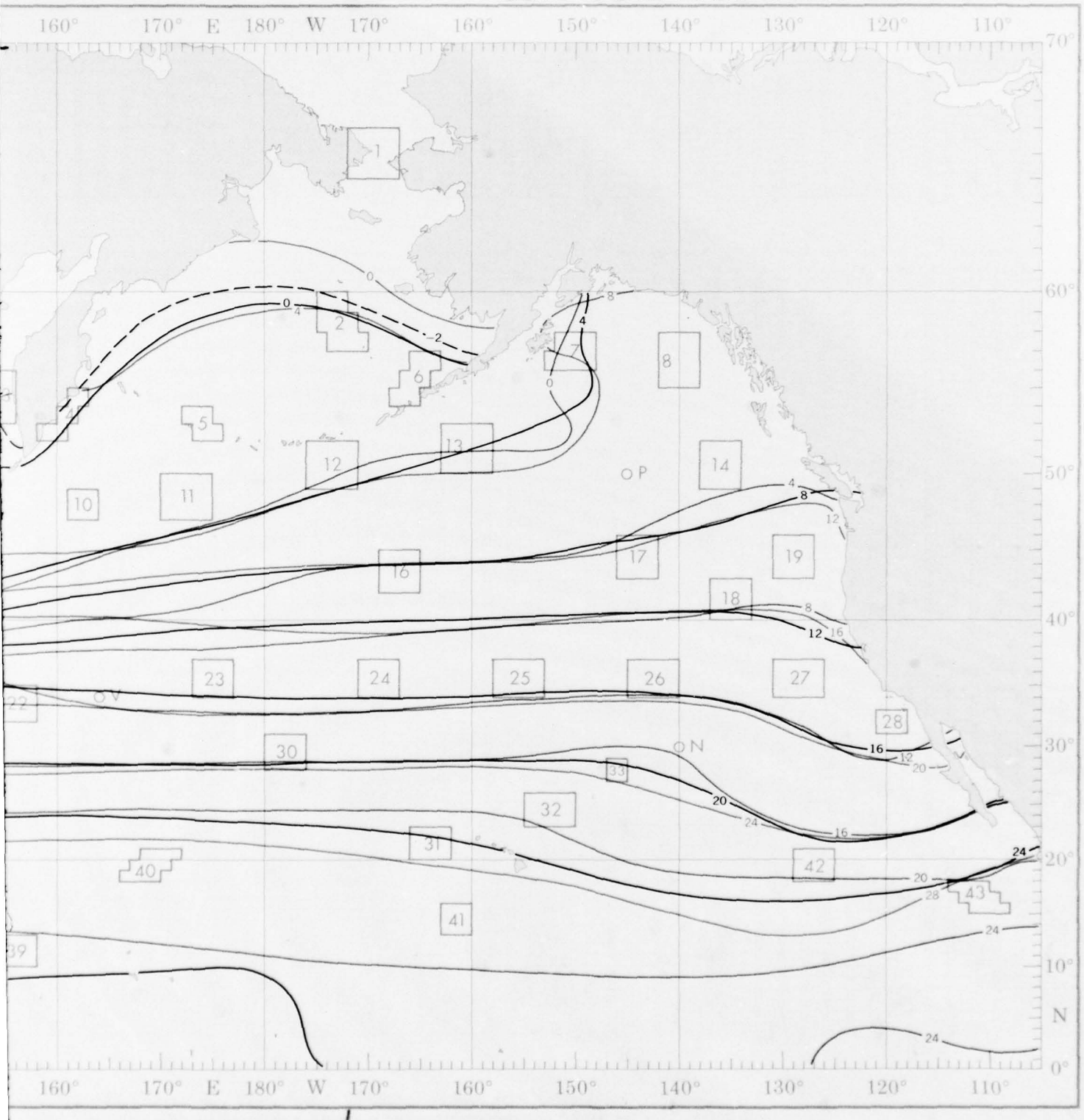



1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
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3.6
4.0
4.5
5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

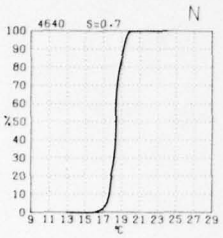
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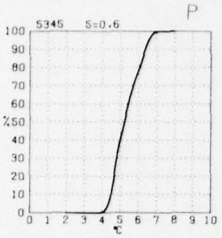

Sea surface temperature
Number of observations
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve
(60% of all observed sea surface temperatures were ≤21°C or ≤35.8°F)
S - Standard deviation of sea surface temperatures (°C)
BLACK LINE - Mean sea surface temperature (°C)
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

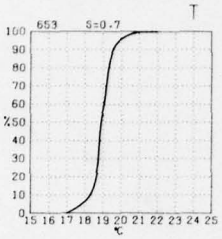
SEA SURFACE TEMPERATURE

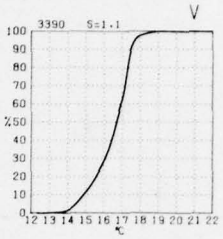


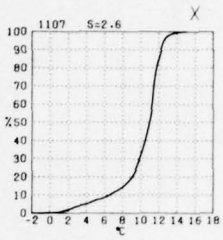
SEA SURFACE TEMPERATURE





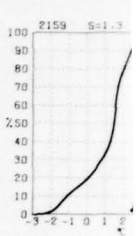


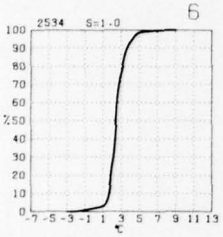


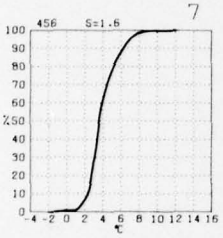


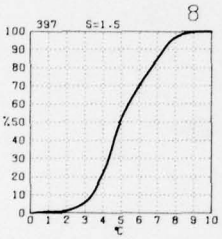
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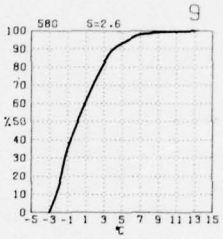
INSUFFICIENT DATA

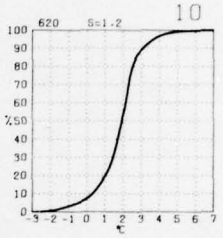


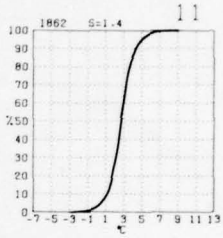


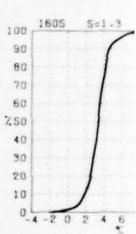


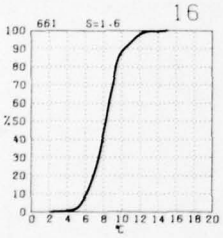


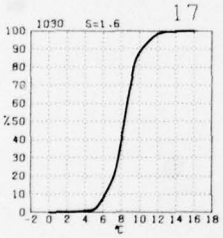


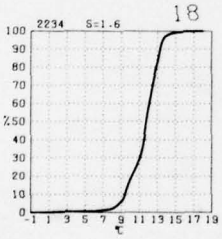


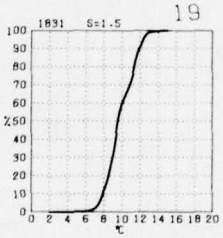


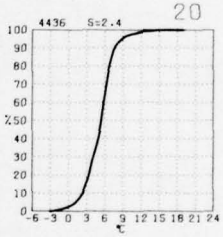


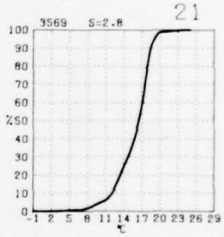


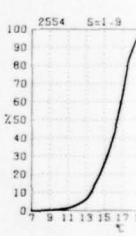


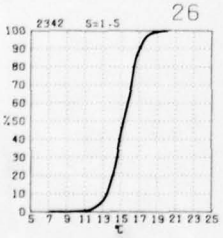


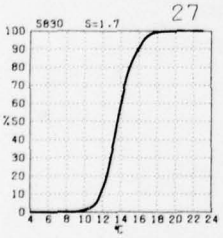


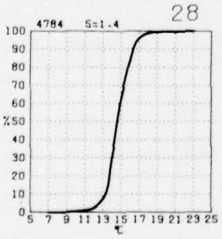


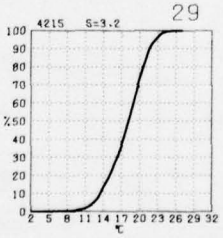


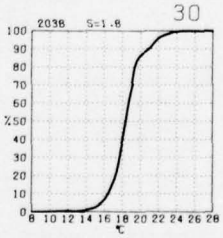


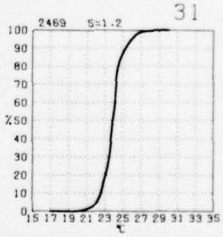


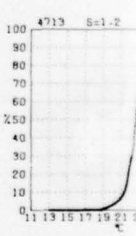


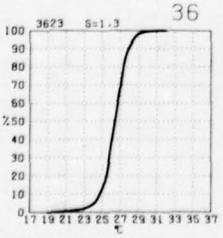


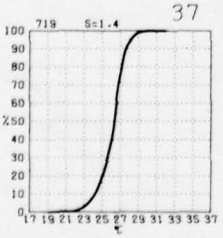


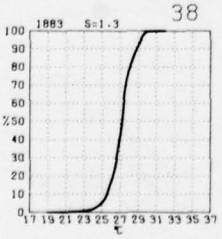


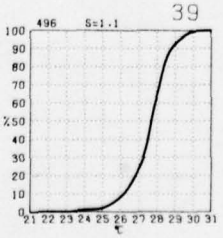


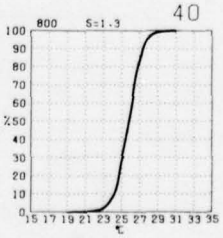


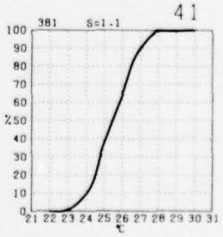


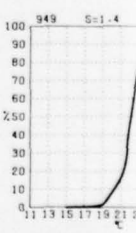






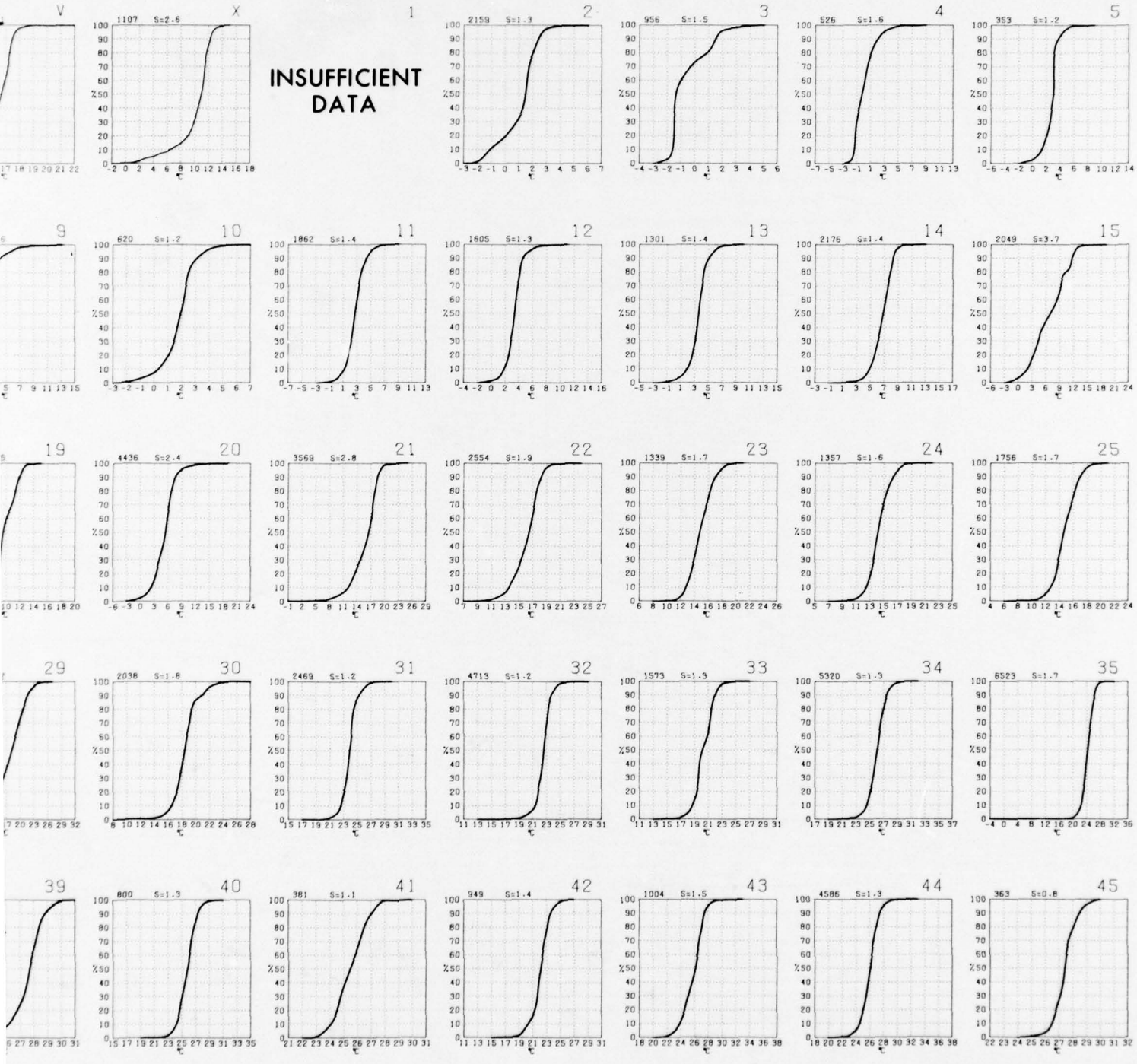






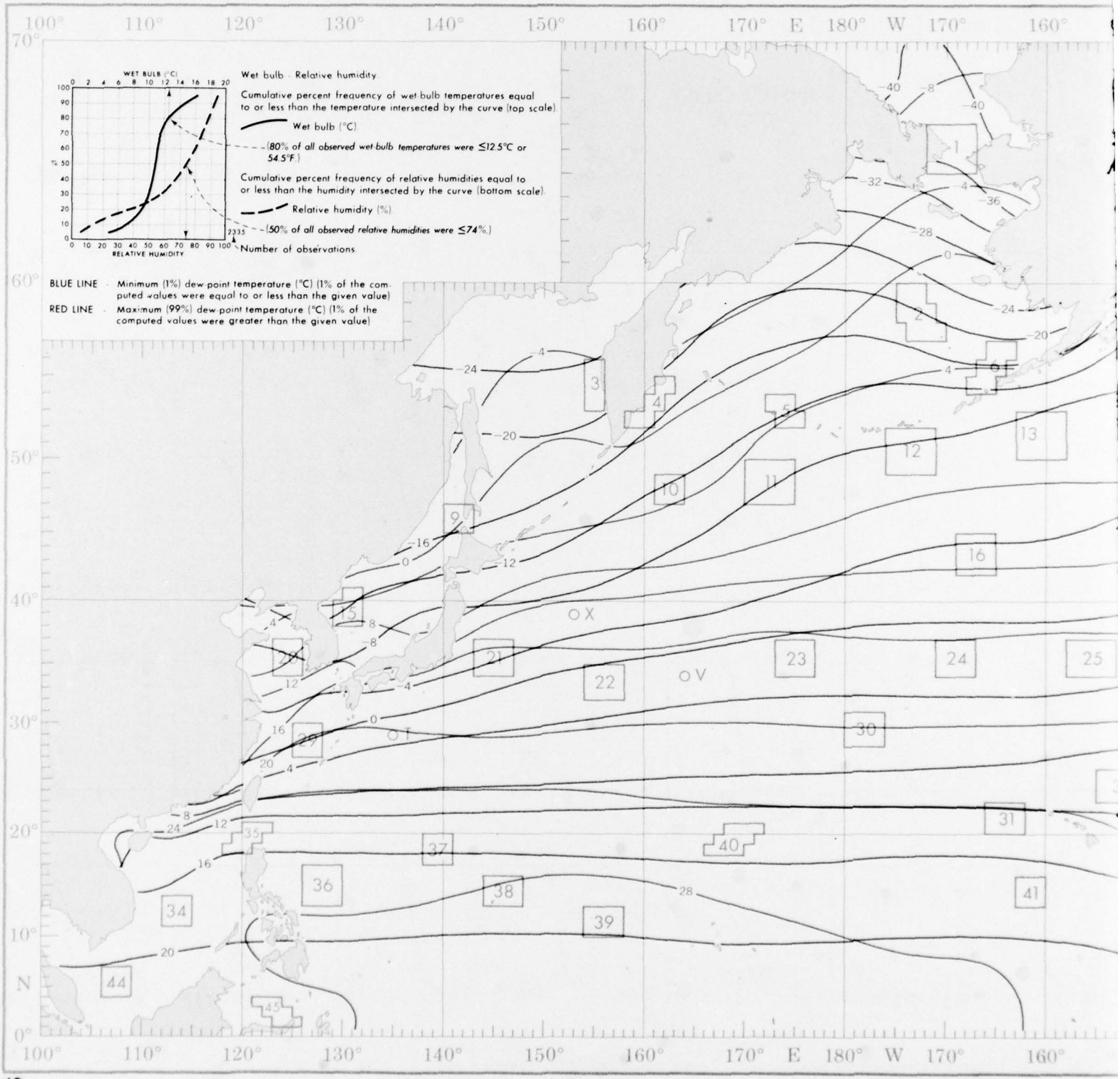
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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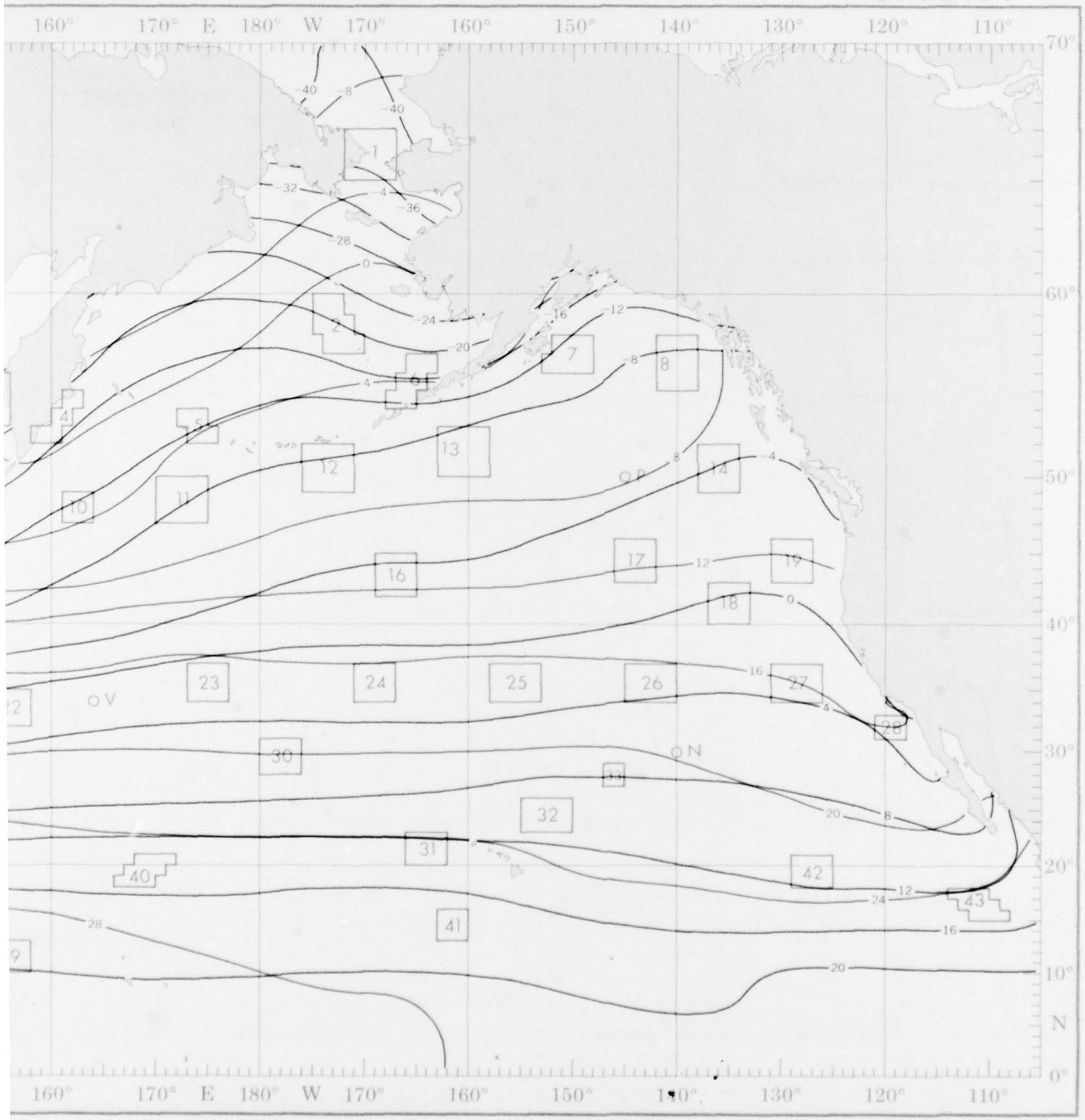


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

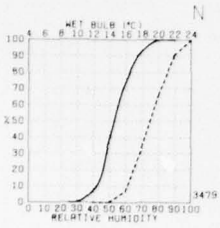
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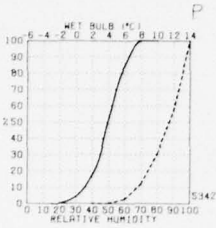

WET BULB (°C)
RELATIVE HUMIDITY
Wet bulb - Relative humidity
Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale)
Wet bulb (°C)
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)
Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)
Relative humidity (%)
(50% of all observed relative humidities were ≤74%.)
2335
Number of observations
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

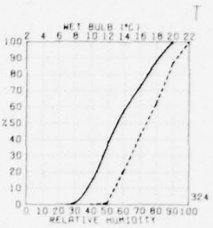
HUMIDITY

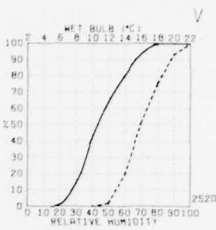

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
-40 -8 -40 -32 -4 -36 -28 0 -24 -20 -16 -12 -8 -4 -8 -4 -12 0 -16 -20 -8 -12 -24 -16 -28 -20
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O P O V O N

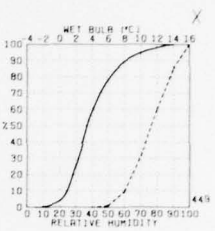
WET BULB AND RELATIVE HUMIDITY



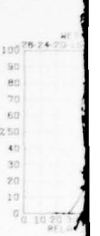


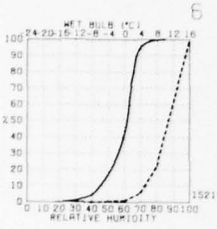


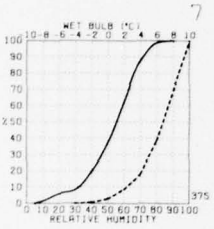


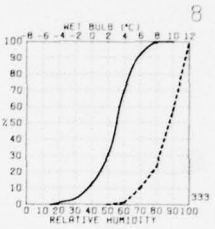


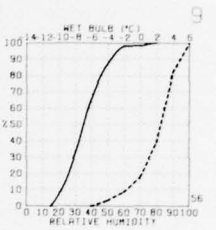
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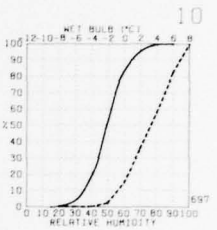


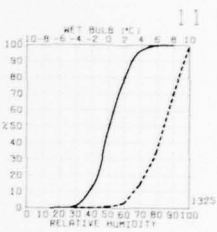


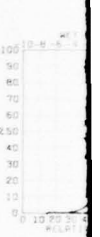


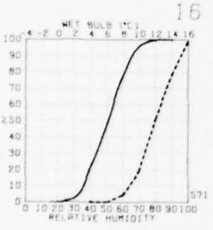


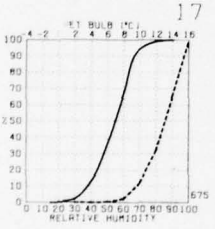


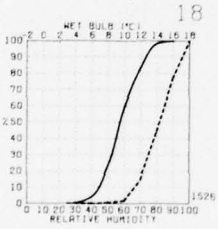


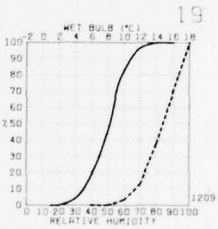


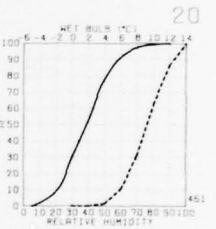


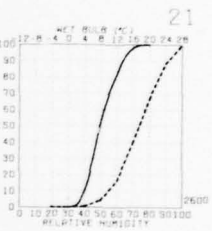




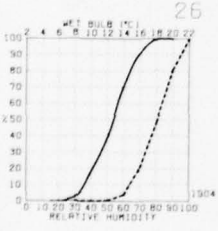


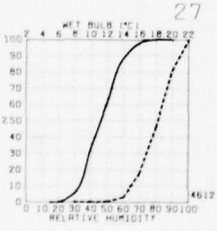


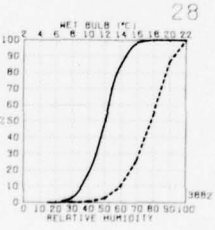


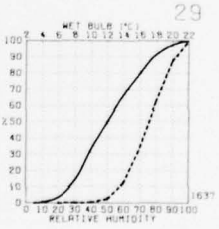


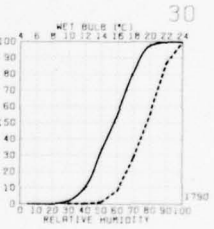


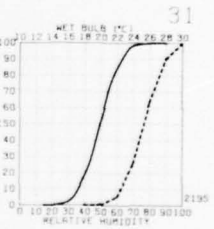


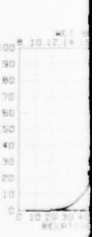


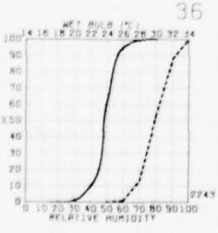


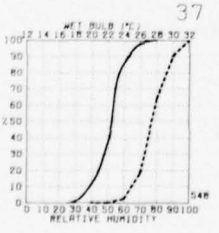


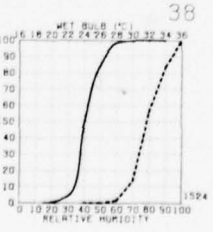


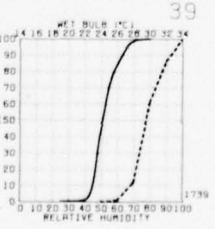


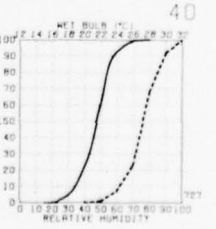


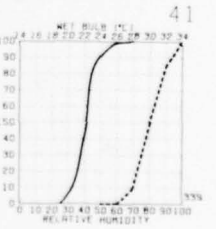














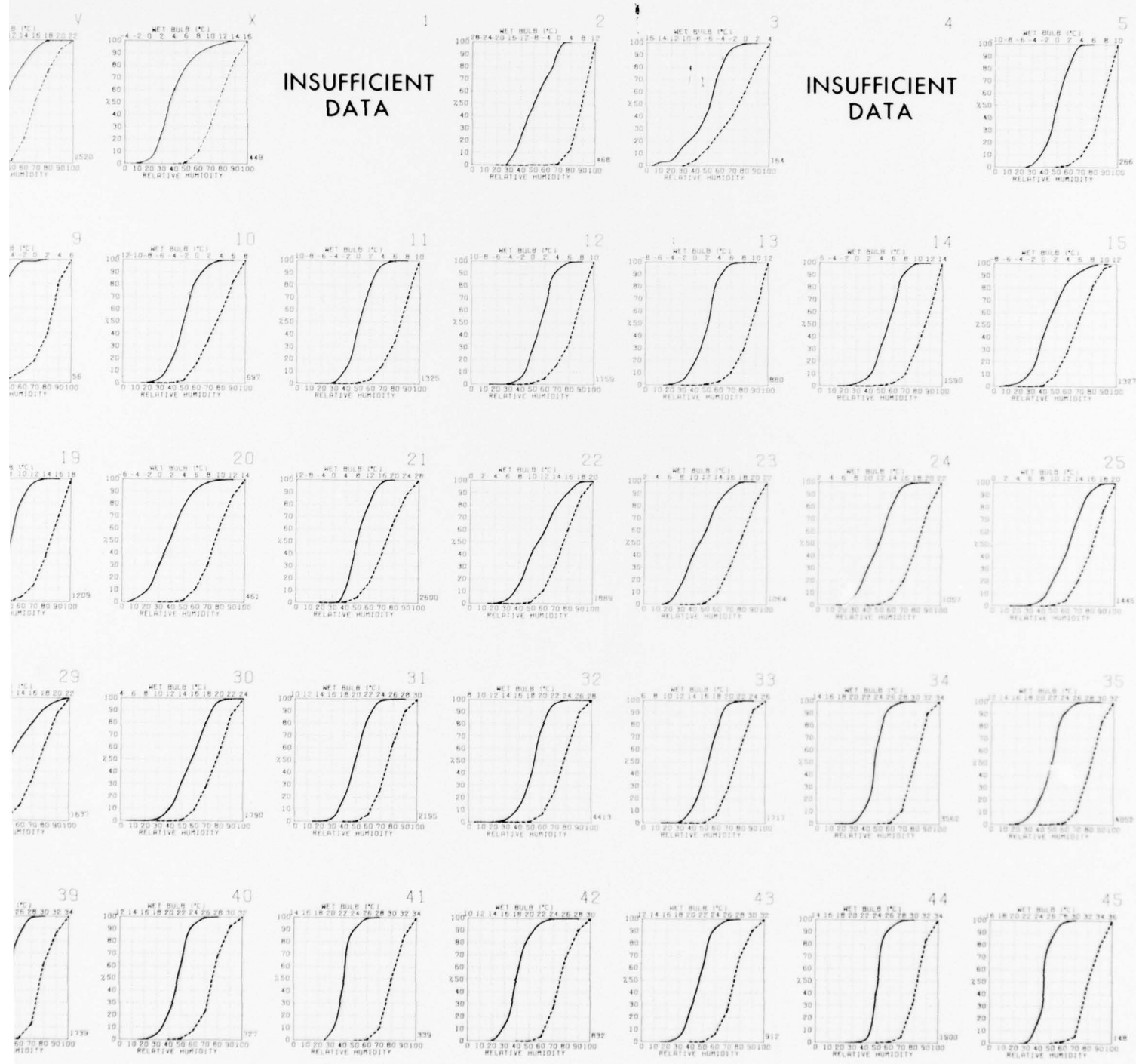
Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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FEBRUARY

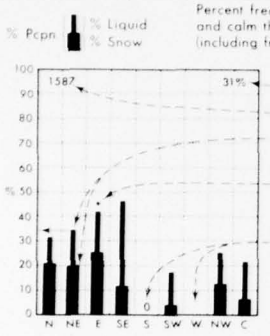
INSUFFICIENT DATA

INSUFFICIENT DATA



objective compilation of available data for specified areas without regard to suspected biases.
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FEBRUARY



Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.

Percentage of present weather observations reporting precipitation.

Number of observations.

(*34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.*)

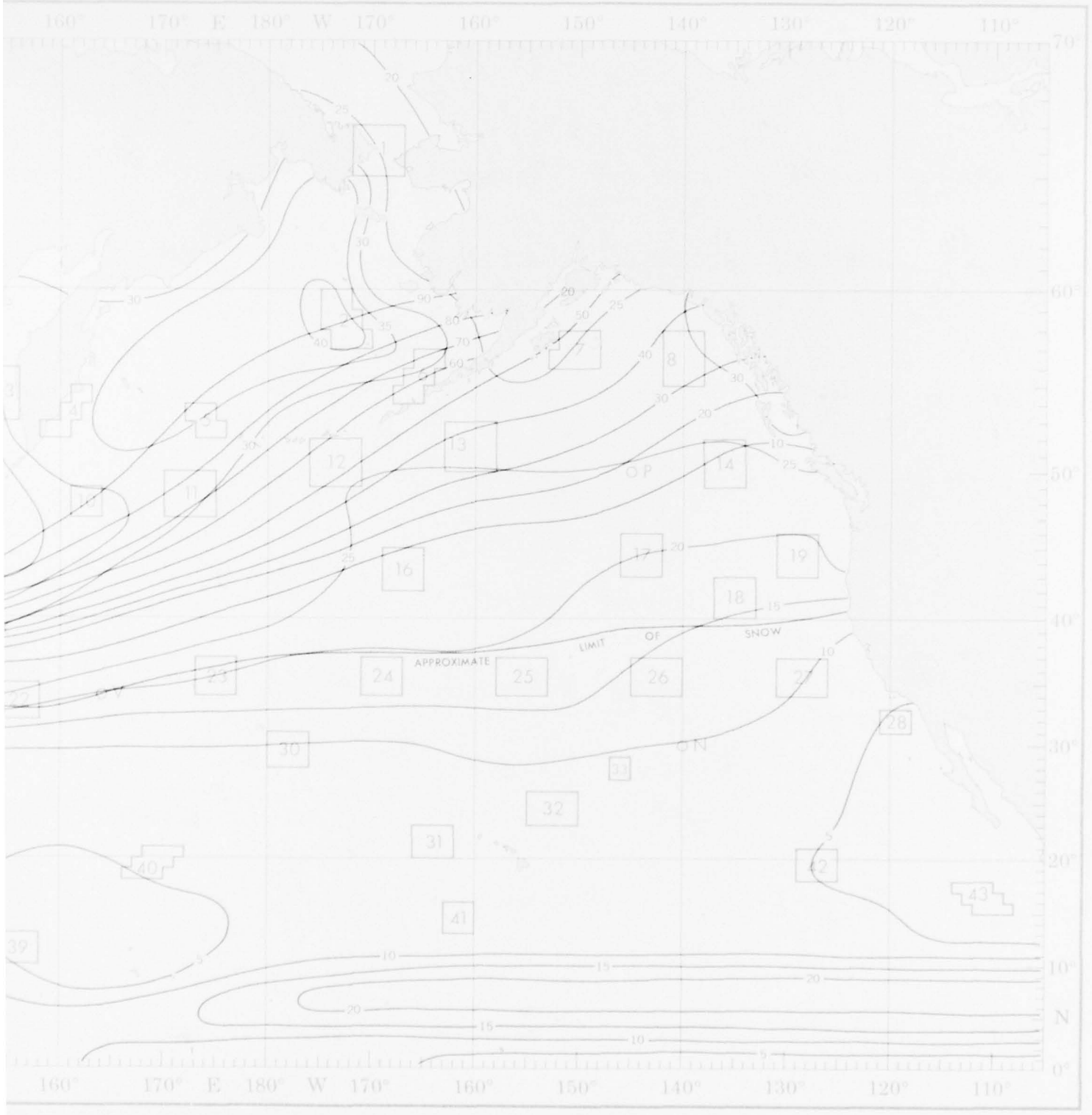
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).

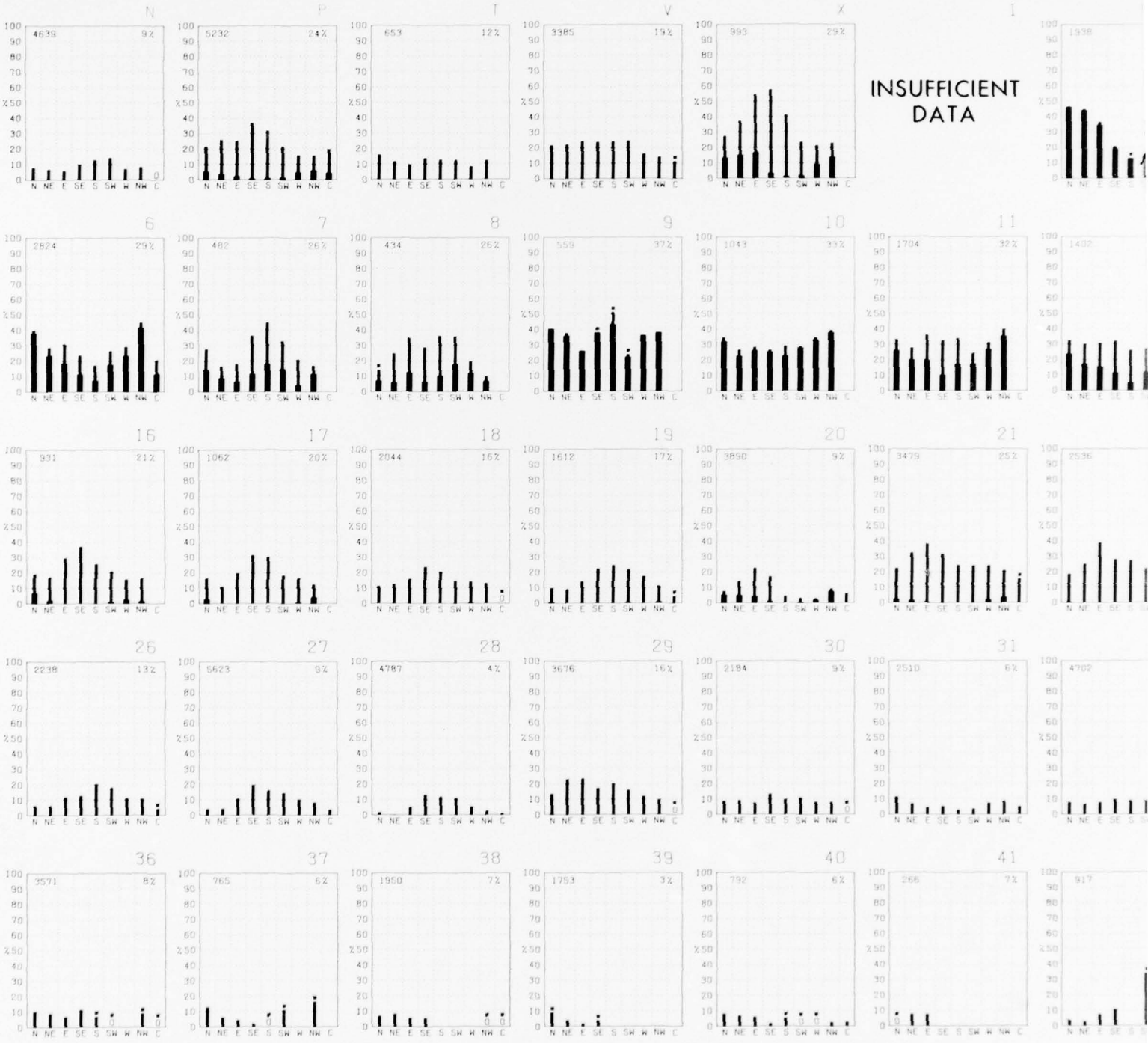
BLUE LINE — Percent frequency of precipitation observations reporting snow.

RED LINE — Percent frequency of observations reporting precipitation.

PRECIPITATION

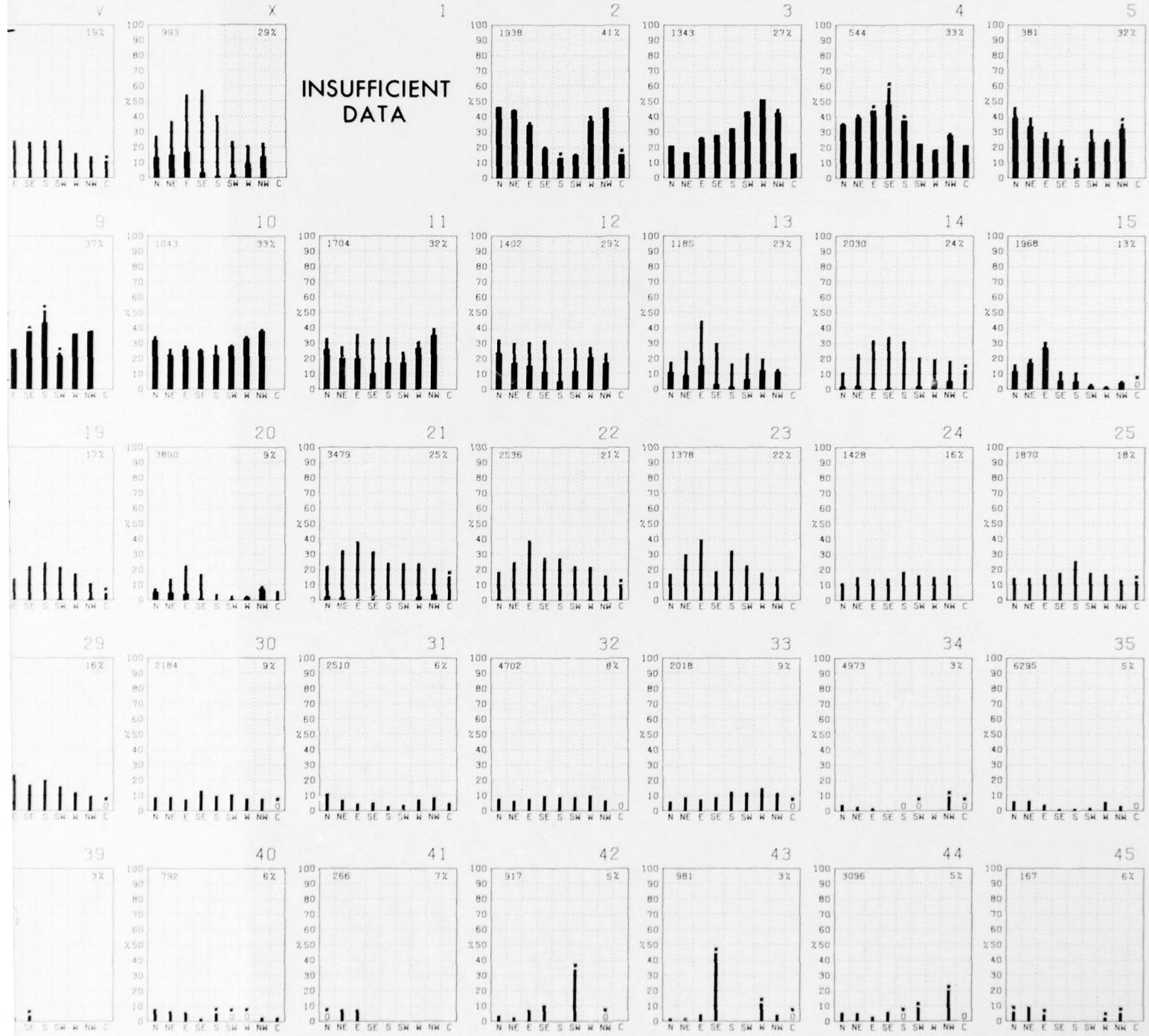


PRECIPITATION



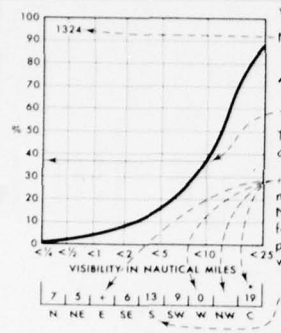
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Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

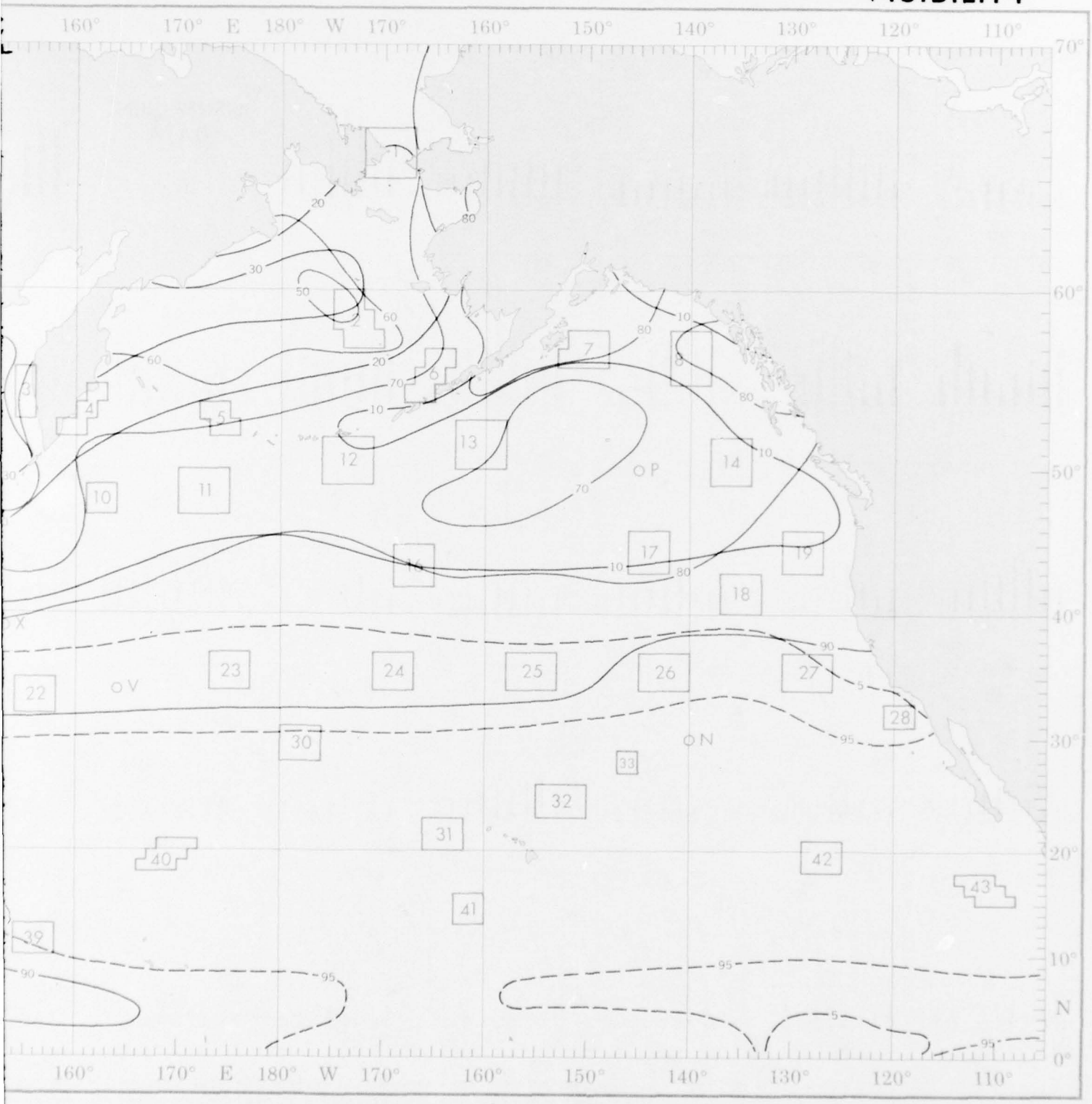
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

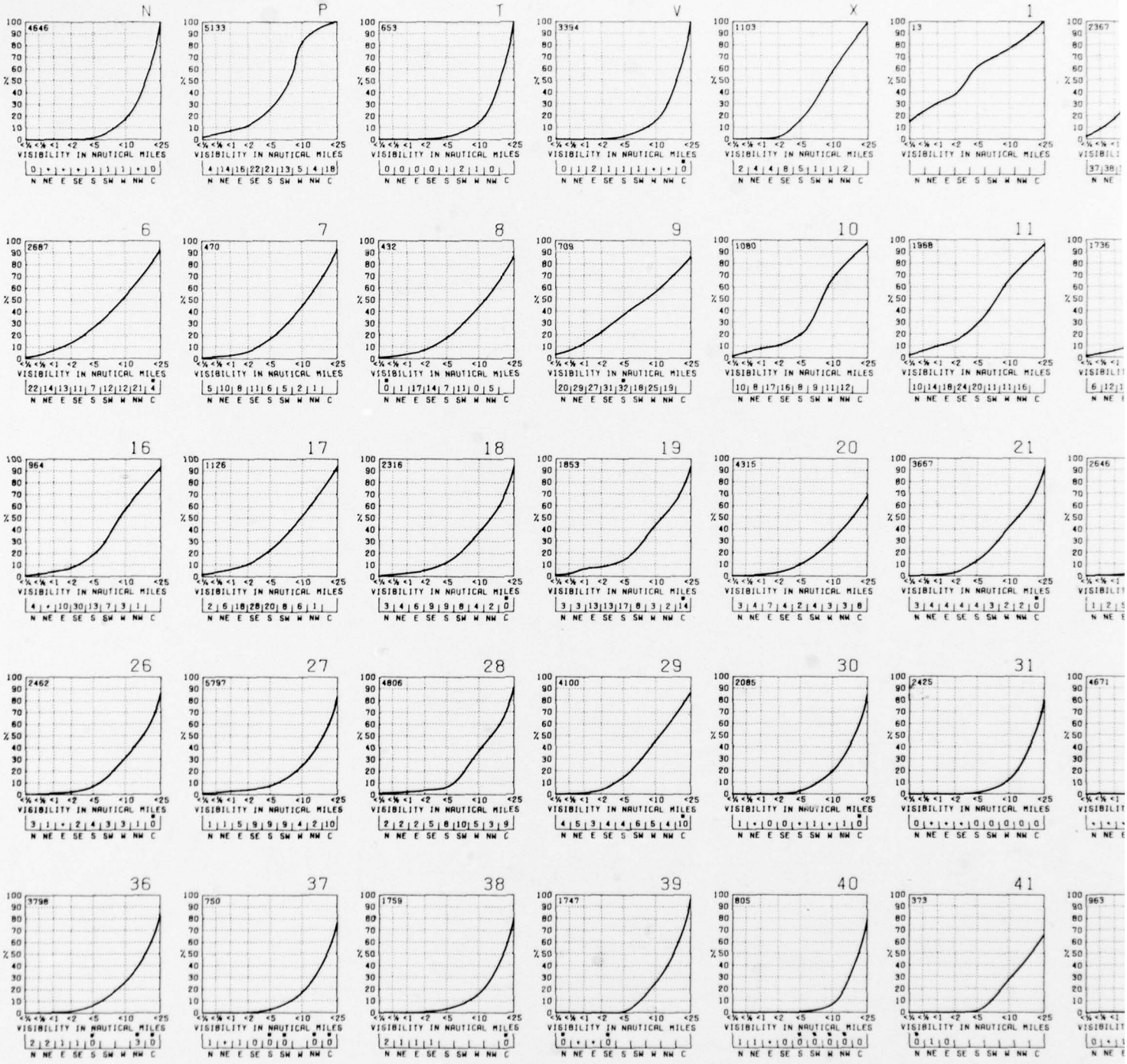
BLUE LINE – Percent frequency of visibilities ≥5 nautical miles

RED LINE – Percent frequency of visibilities <2 nautical miles

VISIBILITY

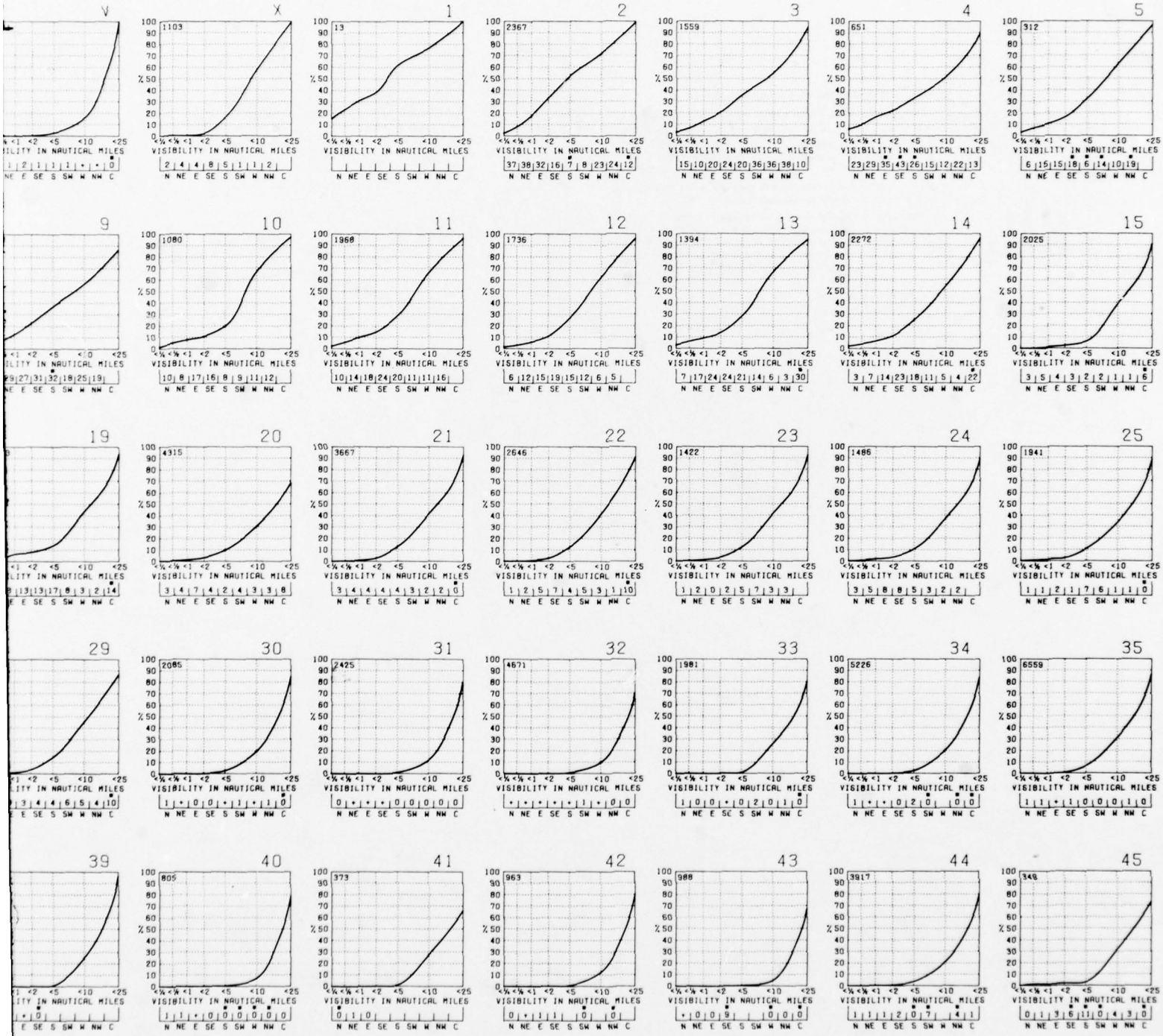

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
20 30 50 60 70 80 10 90 95 5
1 2 3 4 5 6 7 8 10 11 12 13 14 15 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
O P
O V
O N
X

VISIBILITY



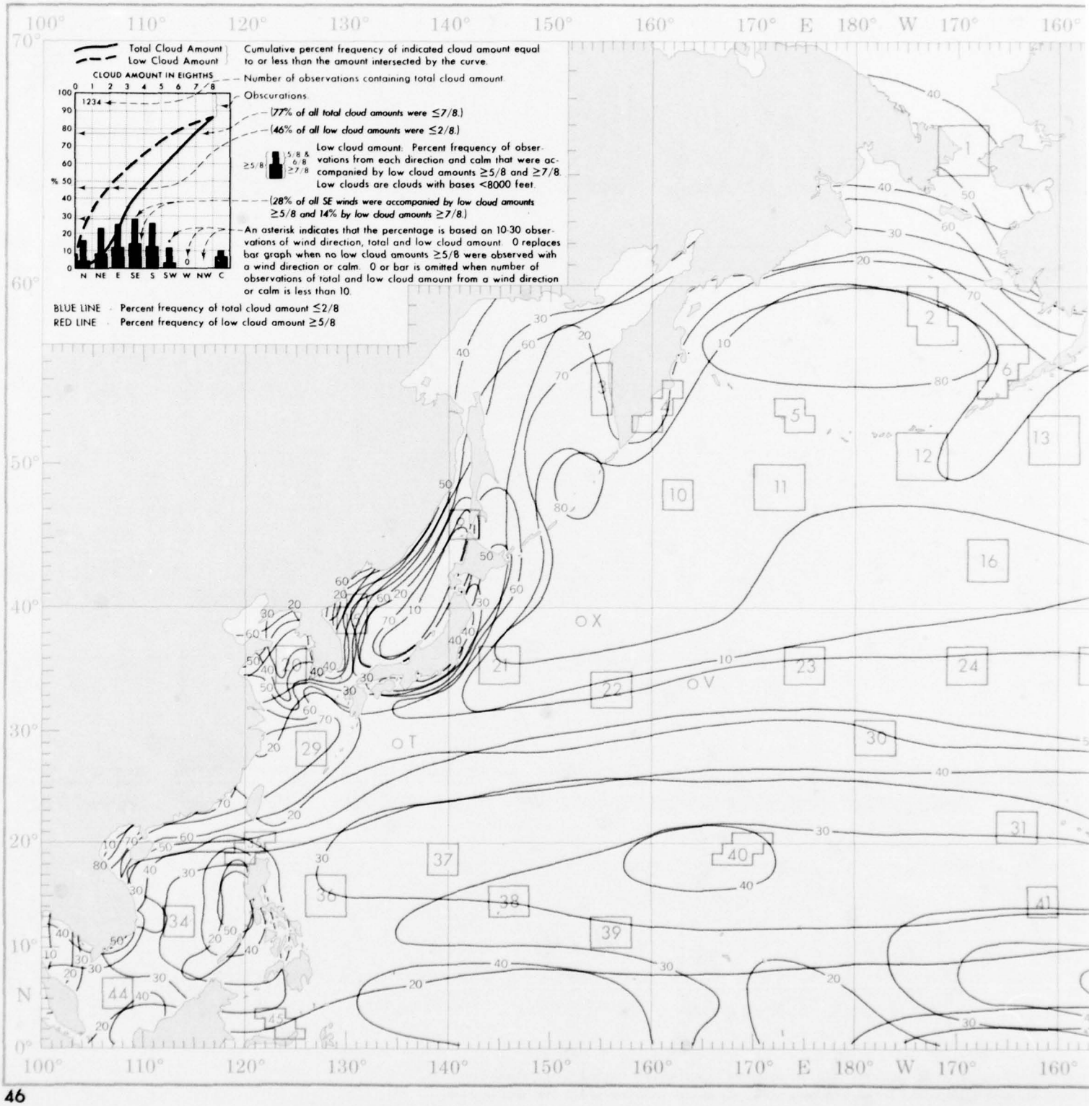
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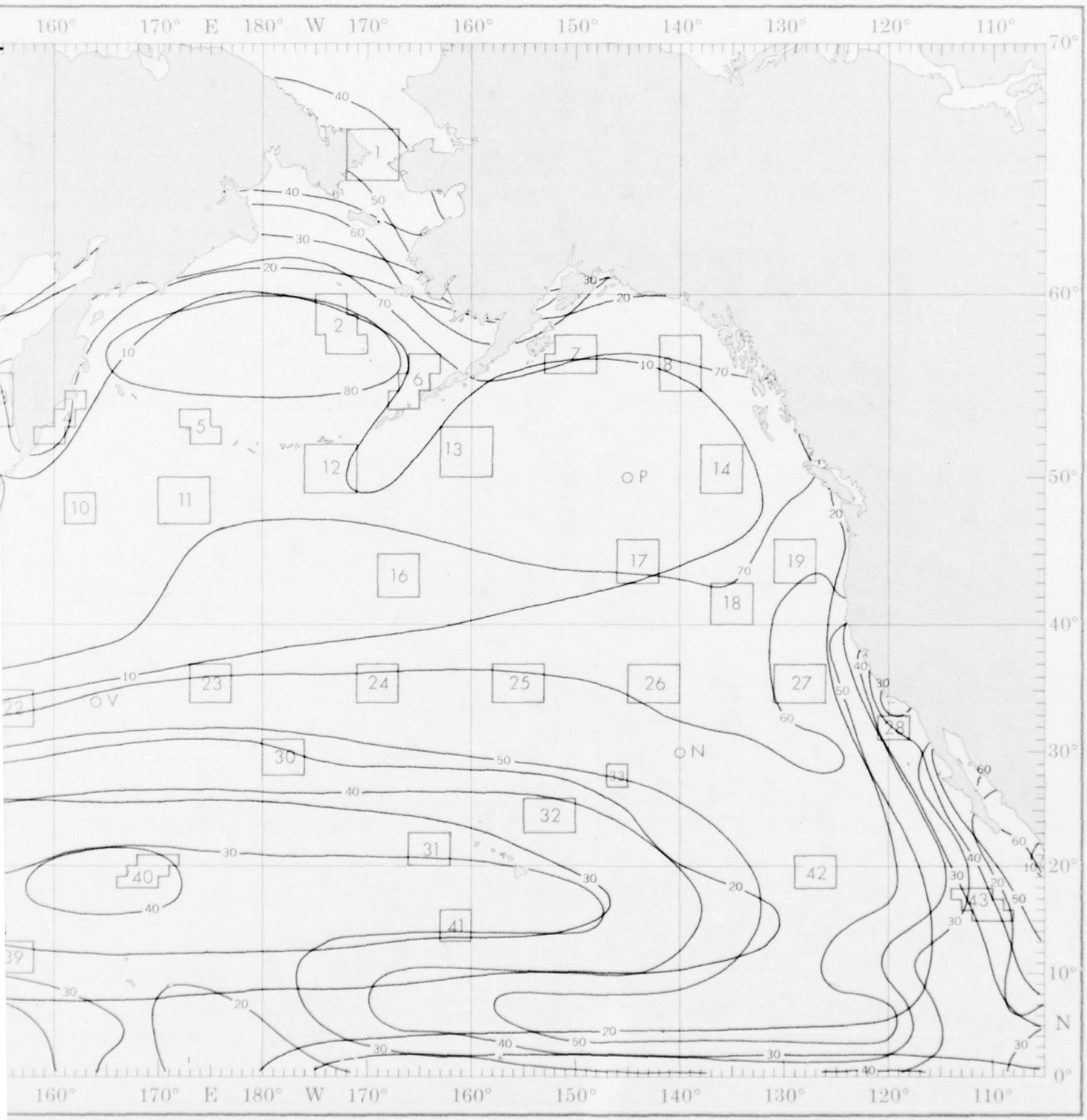


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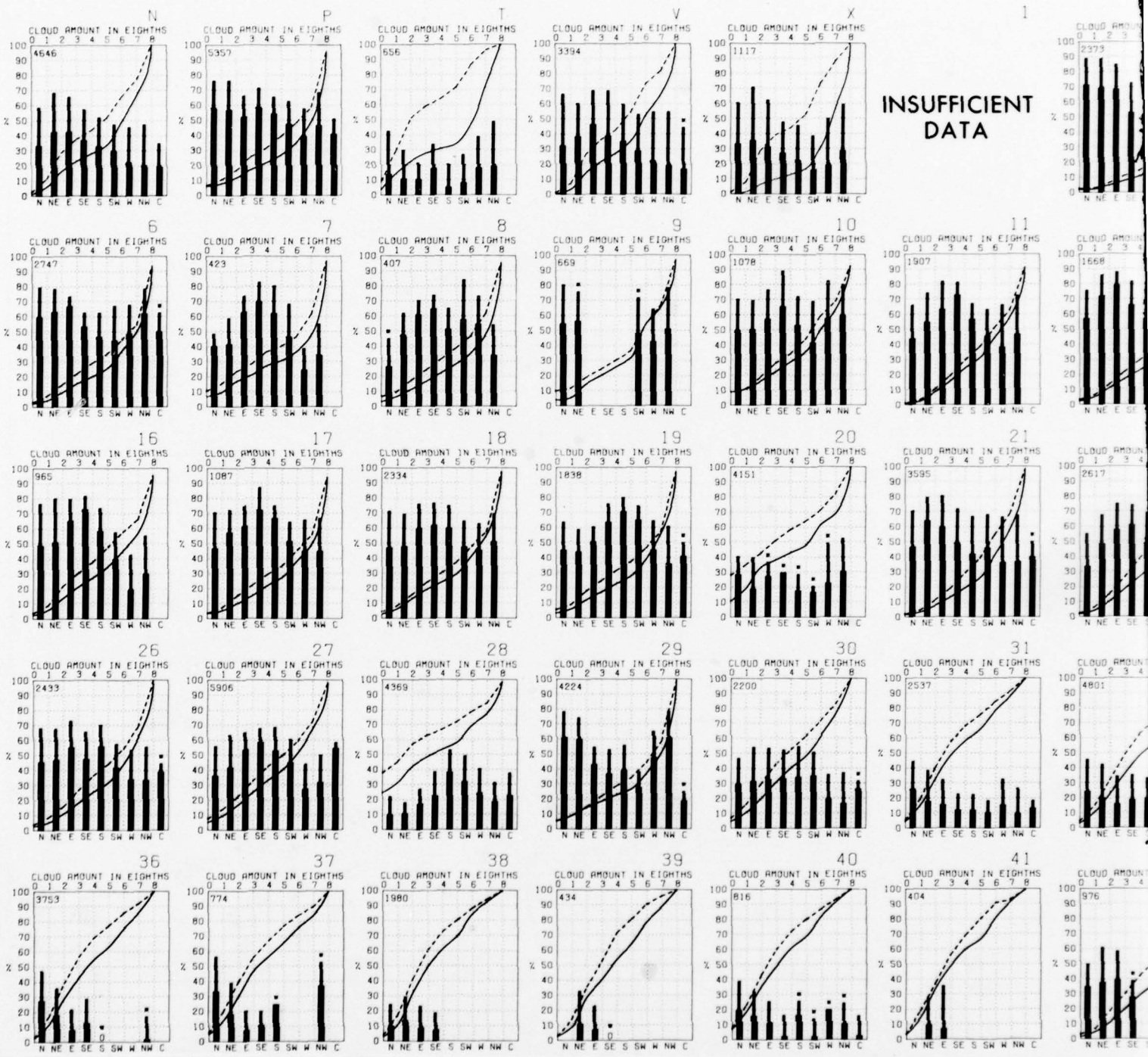
FEBRUARY


Total Cloud Amount
Low Cloud Amount
CLOUD AMOUNT IN EIGHTHS
0 1 2 3 4 5 6 7 8
100
90
80
70
60
% 50
40
30
20
10
0
1234
0
N NE E SE S SW W NW C
Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.
Number of observations containing total cloud amount.
Obscurations.
(77% of all total cloud amounts were ≤7/8.)
(46% of all low cloud amounts were ≤2/8.)
≥5/8
5/8 & 6/8
≥7/8
Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.
BLUE LINE - Percent frequency of total cloud amount ≤2/8
RED LINE - Percent frequency of low cloud amount ≥5/8
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

CLOUD COVER

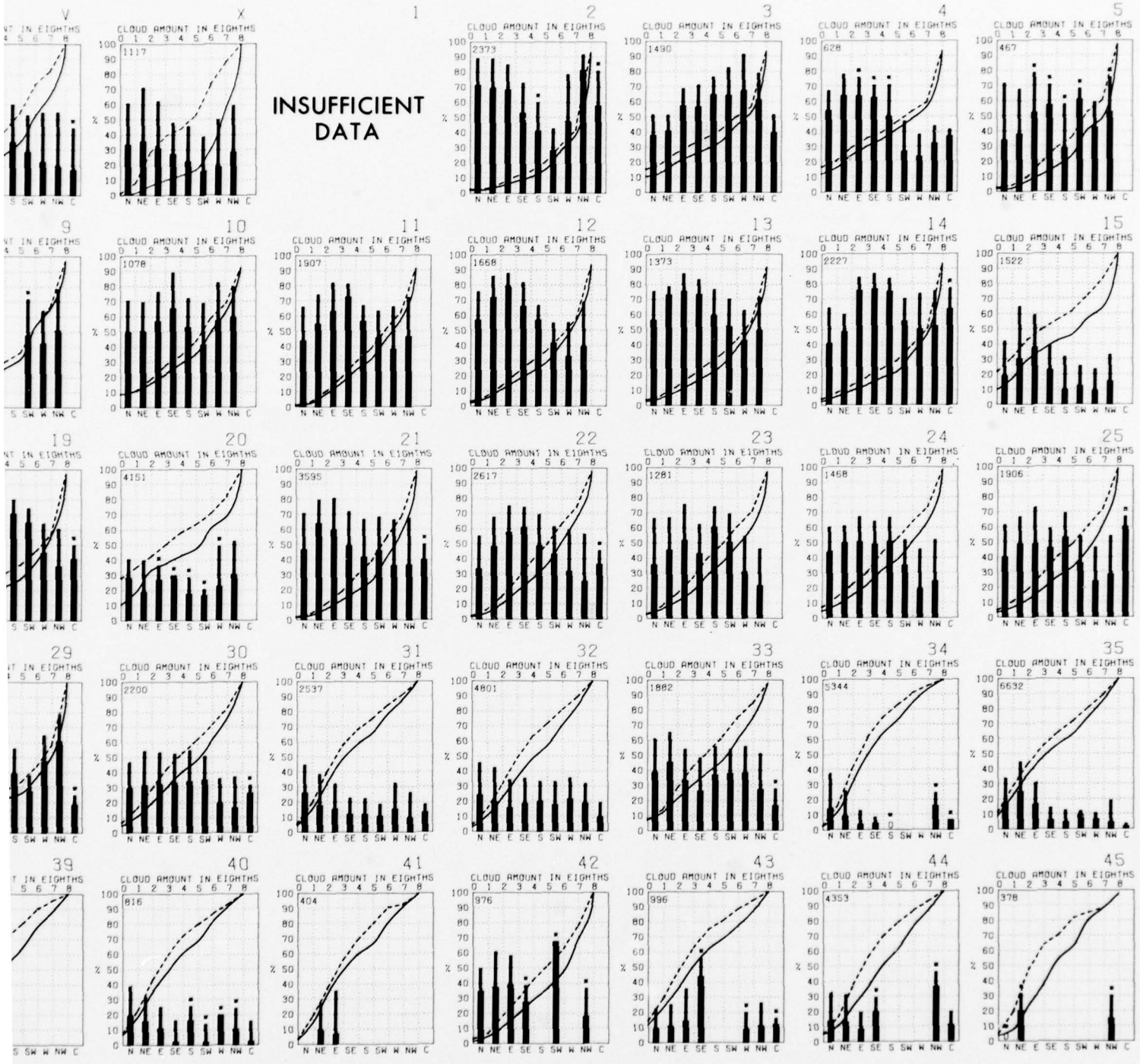

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
OP OV ON
40 30 20 10 80 70 60 50

CLOUD COVER



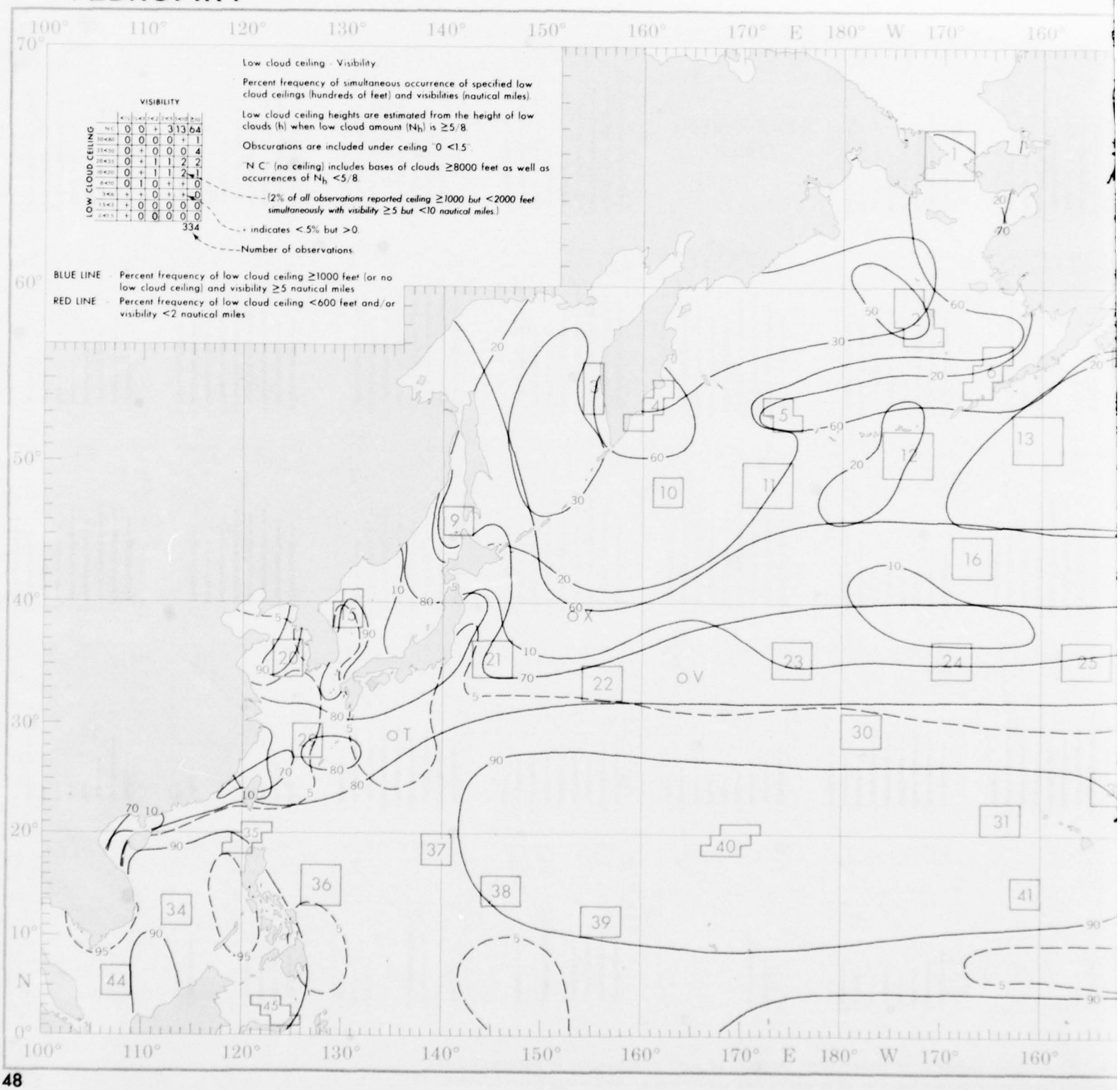
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FEBRUARY


Low cloud ceiling - Visibility
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates < 5% but >0.
334
Number of observations
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° 0° N

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	5	39
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	4
20<35	0	0	*	*	7	34
10<20	*	*	*	1	3	5
6<10	0	*	*	*	*	*
3<6	0	0	*	*	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	*	*	*	*	0

4645

P

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	2	19	7
50<80	*	0	*	*	*	*
35<50	0	0	0	0	1	*
20<35	*	0	*	1	13	4
10<20	*	*	1	5	20	5
6<10	*	1	1	4	2	*
3<6	1	1	2	3	1	*
1.5<3	*	*	*	*	*	0
0<1.5	3	*	0	*	0	0

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T

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	5	59
50<80	0	0	0	0	0	1
35<50	0	0	0	0	*	8
20<35	*	0	0	1	4	16
10<20	0	0	0	*	3	2
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

653

V

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	2	41
50<80	0	0	0	*	*	1
35<50	0	0	0	*	*	2
20<35	0	*	*	*	5	32
10<20	0	*	*	1	5	9
6<10	*	*	0	*	*	*
3<6	0	0	0	*	*	*
1.5<3	0	0	0	0	*	*
0<1.5	*	0	0	0	0	*

3393

X

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	6	17	22
50<80	0	0	0	*	0	*
35<50	0	0	0	*	2	3
20<35	*	*	1	4	15	14
10<20	0	*	*	4	6	2
6<10	0	0	0	*	*	*
3<6	0	0	0	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	*	0	0

995

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	8
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	0
10<20	0	0	0	15	8	16
6<10	0	0	0	8	0	0
3<6	8	8	0	0	0	0
1.5<3	15	0	0	0	0	0
0<1.5	0	0	8	0	0	0

13

LOW CLOUD CEILING	VISIBILITY
NC	*
50<80	0
35<50	0
20<35	0
10<20	2
6<10	1
3<6	*
1.5<3	*
0<1.5	3

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	5	24
50<80	0	0	0	0	*	1
35<50	0	*	0	*	1	2
20<35	*	*	*	1	4	6
10<20	1	2	3	6	11	13
6<10	*	*	1	3	3	1
3<6	*	*	*	*	1	*
1.5<3	0	0	0	0	*	0
0<1.5	2	1	2	2	1	*

2363

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	33
50<80	0	0	0	*	*	1
35<50	0	0	0	0	1	1
20<35	0	*	0	1	3	5
10<20	*	0	1	4	6	11
6<10	0	0	*	2	7	7
3<6	*	0	0	2	3	1
1.5<3	0	0	0	0	0	0
0<1.5	2	1	1	*	1	0

270

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	1	0	4	27
50<80	0	0	0	0	0	*
35<50	0	0	0	0	1	2
20<35	0	0	*	*	1	7
10<20	0	0	1	1	7	15
6<10	0	0	1	3	6	11
3<6	*	0	*	2	1	1
1.5<3	0	0	*	*	1	0
0<1.5	2	1	1	2	0	0

317

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	3	5	22
50<80	*	0	*	0	*	1
35<50	0	0	0	1	*	4
20<35	2	2	7	4	7	12
10<20	*	*	3	4	4	3
6<10	*	*	0	1	1	1
3<6	1	0	0	1	0	0
1.5<3	0	0	0	0	0	*
0<1.5	3	1	2	*	*	*

277

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	13	14
50<80	0	0	0	0	*	0
35<50	0	*	0	*	1	1
20<35	*	0	*	1	13	10
10<20	*	1	1	3	20	4
6<10	*	*	*	2	2	2
3<6	1	1	*	*	*	*
1.5<3	*	*	0	*	0	*
0<1.5	3	1	1	1	*	0

962

11

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	-	2	10	18
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	1
20<35	*	0	*	1	2	4
10<20	1	*	*	4	11	8
6<10	*	1	1	4	8	4
3<6	*	*	1	1	2	1
1.5<3	*	0	*	1	*	*
0<1.5	5	2	2	2	1	*

1336

LOW CLOUD CEILING	VISIBILITY
NC	*
50<80	0
35<50	0
20<35	*
10<20	*
6<10	1
3<6	*
1.5<3	*
0<1.5	2

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	15	21
50<80	0	0	0	0	*	1
35<50	0	0	0	0	1	1
20<35	*	0	0	1	8	4
10<20	0	*	*	3	10	9
6<10	*	*	1	3	5	5
3<6	*	0	*	1	1	*
1.5<3	0	0	*	0	*	0
0<1.5	2	1	1	1	*	*

756

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	1	7	22
50<80	0	0	0	0	*	*
35<50	0	0	0	0	1	1
20<35	*	0	0	1	3	7
10<20	0	*	*	2	8	12
6<10	*	*	1	3	8	7
3<6	*	*	1	1	2	1
1.5<3	0	*	*	0	*	*
0<1.5	3	1	2	3	1	*

722

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	*	4	26
50<80	0	0	0	*	*	1
35<50	0	0	0	*	1	1
20<35	*	*	0	*	3	15
10<20	*	*	*	2	7	21
6<10	0	0	*	1	3	5
3<6	*	*	*	1	1	1
1.5<3	0	*	0	*	*	*
0<1.5	1	*	1	*	1	*

1691

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	*	5	27
50<80	0	0	0	0	*	2
35<50	0	0	0	0	*	1
20<35	0	0	0	*	6	14
10<20	0	*	*	1	7	13
6<10	*	*	*	2	5	5
3<6	*	*	*	1	2	1
1.5<3	0	0	*	*	*	*
0<1.5	2	*	1	1	*	0

1439

20

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	13	48
50<80	0	0	0	0	1	1
35<50	0	0	0	0	2	4
20<35	0	0	0	2	5	7
10<20	0	0	1	*	8	5
6<10	0	0	0	*	1	3
3<6	0	0	*	0	*	1
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	0	0	0

400

21

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	4	25
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	2
20<35	0	0	*	*	1	4
10<20	*	*	*	3	8	15
6<10	*	*	1	2	6	8
3<6	*	*	*	1	1	1
1.5<3	*	*	*	*	*	*
0<1.5	*	*	*	1	1	*

2728

LOW CLOUD CEILING	VISIBILITY
NC	0
50<80	0
35<50	0
20<35	*
10<20	*
6<10	*
3<6	*
1.5<3	0
0<1.5	*

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	33
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	2
20<35	0	0	*	*	2	8
10<20	*	*	*	1	6	20
6<10	*	*	*	2	4	10
3<6	0	0	0	*	1	1
1.5<3	0	0	0	*	*	*
0<1.5	*	*	*	*	1	*

1806

27

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	4	39
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	3
20<35	*	0	0	*	2	10
10<20	*	*	*	1	4	18
6<10	*	*	*	*	3	8
3<6	0	*	*	*	1	1
1.5<3	0	*	0	*	*	*
0<1.5	1	1	*	*	1	*

4566

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	20	48
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	*
20<35	0	0	*	*	3	4
10<20	*	0	*	*	4	7
6<10	0	*	*	*	2	2
3<6	*	*	*	*	1	*
1.5<3	0	*	*	*	*	0
0<1.5	1	1	*	*	*	*

3841

29

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	5	23
50<80	0	0	0	0	*	*
35<50	0	0	0	0	*	1
20<35	*	*	*	2	5	8
10<20	*	0	*	3	13	15
6<10	0	*	*	3	7	6
3<6	0	*	*	1	2	1
1.5<3	0	*	0	*	*	0
0<1.5	*	*	0	*	1	*

2138

30

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	5	48
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	2
20<35	*	*	*	2	5	9
10<20	*	0	*	3	13	15
6<10	0	*	*	3	7	6
3<6	0	*	*	1	2	1
1.5<3	0	*	0	*	*	0
0<1.5	*	*	0	*	1	*

1631

31

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	5	63
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	*	2	7
10<20	0	*	0	*	2	11
6<10	0	0	0	*	1	4
3<6	0	0	*	*	*	1
1.5<3	0	0	0	*	*	*
0<1.5	0	0	0	*	*	*

2133

LOW CLOUD CEILING	VISIBILITY
NC	*
50<80	0
35<50	0
20<35	*
10<20	0
6<10	0
3<6	0
1.5<3	0
0<1.5	0

36

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	9	59
50<80	0	0	0	0	0	*
35<50	0	0	*	*	*	1
20<35	0	*	*	*	2	3
10<20	*	*	*	1	3	8
6<10	0	0	*	1	3	4
3<6	*	*	*	*	1	*
1.5<3	*	0	*	*	*	*
0<1.5	0	*	*	*	*	*

3161

37

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	5	61
50<80	0	0	0	0	0	0
35<50	0	0	0	0	1	1
20<35	0	0	0	0	1	5
10<20	0	0	0	*	3	11
6<10	0	0	0	*	3	5
3<6	0	0	0	*	1	1
1.5<3	0	0	0	0	0	0
0<1.5	*	0	*	*	0	1

577

38

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	67
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	0	0	0	*	1	5
10<20	*	*	*	*	3	8
6<10	0	0	*	*	2	4
3<6	0	0	0	0	*	1
1.5<3	0	0	0	0	*	0
0<1.5	0	0	*	*	*	0

1165

39

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	73
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	4
10<20	0	0	*	0	*	8
6<10	0	0	0	0	1	6
3<6	0	0	0	0	*	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

244

40

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	70
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	7
10<20	0	0	*	0	2	10
6<10	0	0	*	0	*	4
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	*

680

41

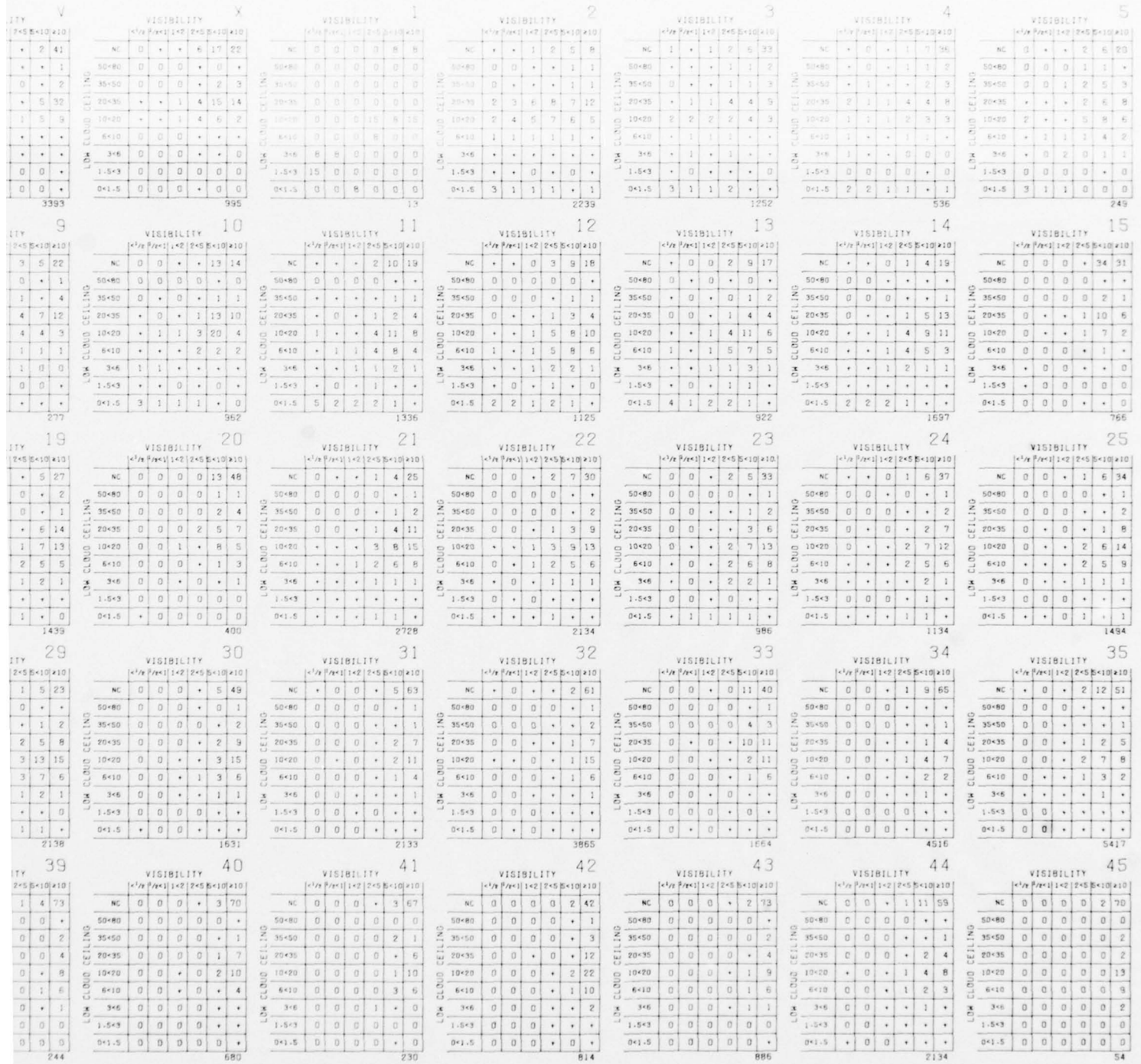
LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	67
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	1
20<35	0	0	0	0	*	6
10<20	0	0	0	0	1	10
6<10	0	0	0	0	3	6
3<6	0	0	0	1	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	*	0

230

LOW CLOUD CEILING	VISIBILITY
NC	0
50<80	0
35<50	0
20<35	*
10<20	0
6<10	0
3<6	0
1.5<3	0
0<1.5	0

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

FEBRUARY



LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	6	17	22
50<80	0	0	0	*	0	*
35<50	0	0	0	*	2	3
20<35	*	*	1	4	15	14
10<20	*	*	1	4	6	2
6<10	0	0	0	*	*	*
3<6	0	0	0	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	*	0	0

V — 3393

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	6	17	22
50<80	0	0	0	*	0	*
35<50	0	0	0	*	2	3
20<35	*	*	1	4	15	14
10<20	*	5	4	6	6	2
6<10	0	0	0	*	*	*
3<6	0	0	0	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	*	0	0

X — 995

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	3	8	8
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	0
10<20	0	0	0	10	8	15
6<10	0	0	0	8	0	0
3<6	8	8	0	0	0	0
1.5<3	15	0	0	0	0	0
0<1.5	0	0	8	0	0	0

1 — 13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	1	2	5	8
50<80	0	0	*	*	1	1
35<50	0	0	*	*	1	1
20<35	2	3	6	8	7	12
10<20	7	4	5	7	6	5
6<10	1	1	1	1	1	*
3<6	*	*	*	*	*	*
1.5<3	*	*	0	*	0	*
0<1.5	3	1	1	1	*	1

2 — 2239

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	1	2	5	33
50<80	*	*	*	1	1	2
35<50	0	*	*	1	1	3
20<35	*	1	1	4	4	9
10<20	2	2	2	2	4	3
6<10	*	1	1	1	*	*
3<6	*	1	*	1	*	*
1.5<3	*	0	*	*	*	0
0<1.5	3	1	1	2	*	*

3 — 1252

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	7	36
50<80	*	0	*	1	1	2
35<50	*	1	*	*	2	3
20<35	2	1	1	4	4	8
10<20	1	*	1	2	3	3
6<10	1	*	*	1	1	*
3<6	1	*	*	0	0	0
1.5<3	0	0	0	0	*	0
0<1.5	2	2	1	1	*	1

4 — 536

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	2	6	20
50<80	0	0	0	1	1	*
35<50	0	0	1	2	5	3
20<35	*	*	*	2	6	8
10<20	2	*	*	5	8	6
6<10	*	1	1	1	4	2
3<6	*	0	2	0	1	1
1.5<3	0	0	0	0	*	0
0<1.5	3	1	1	0	0	0

5 — 249

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	3	22
50<80	0	*	0	*	1	1
35<50	4	7	12			
20<35	4	4	3			
10<20	1	1	1			
6<10	1	0	0			
3<6	0	0	*			
1.5<3	*	*	0	*	0	*
0<1.5	3	1	1	1	*	0

9 — 277

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	13	14
50<80	0	0	0	0	*	0
35<50	0	*	0	*	1	1
20<35	*	0	*	1	13	10
10<20	*	1	1	3	20	4
6<10	*	*	*	2	2	2
3<6	1	1	*	*	*	*
1.5<3	*	*	0	*	0	*
0<1.5	3	1	1	1	*	0

10 — 962

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	2	10	19
50<80	0	0	0	0	*	*
35<50	*	*	*	*	1	1
20<35	*	0	*	1	2	4
10<20	1	*	*	4	11	8
6<10	*	1	1	4	8	4
3<6	*	*	1	1	2	1
1.5<3	*	0	*	1	*	*
0<1.5	5	2	2	2	1	*

11 — 1336

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	3	9	18
50<80	0	0	0	0	0	*
35<50	0	0	0	*	1	1
20<35	0	*	*	1	3	4
10<20	*	*	1	5	8	10
6<10	1	*	1	5	8	5
3<6	*	*	1	2	2	1
1.5<3	*	0	*	1	*	0
0<1.5	2	2	1	2	1	*

12 — 1125

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	2	9	17
50<80	0	*	0	*	0	*
35<50	0	0	*	0	1	2
20<35	0	0	*	1	4	4
10<20	*	*	1	4	11	6
6<10	1	*	1	5	7	5
3<6	*	*	1	1	3	1
1.5<3	*	0	*	1	1	*
0<1.5	4	1	2	2	1	*

13 — 922

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	4	19
50<80	0	0	*	*	*	*
35<50	0	0	0	*	*	1
20<35	0	0	*	1	5	13
10<20	*	*	1	4	9	11
6<10	*	*	1	4	5	3
3<6	*	*	1	2	1	1
1.5<3	*	*	*	*	*	*
0<1.5	2	2	2	1	*	*

14 — 1697

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	34	31
50<80	0	0	0	0	*	*
35<50	0	0	0	0	2	1
20<35	0	*	*	1	10	6
10<20	0	*	*	1	7	2
6<10	0	0	0	*	1	*
3<6	*	0	0	*	*	0
1.5<3	*	0	0	0	0	0
0<1.5	0	0	0	*	*	0

15 — 766

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	5	27			
50<80	0	*	2			
35<50	0	*	1			
20<35	*	5	14			
10<20	1	7	13			
6<10	2	5	5			
3<6	1	2	1			
1.5<3	*	*	*			
0<1.5	1	*	0			

19 — 1439

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	13	48
50<80	0	0	0	0	1	1
35<50	0	0	0	0	2	4
20<35	0	0	0	2	5	7
10<20	0	0	1	*	8	5
6<10	0	0	0	*	1	3
3<6	0	0	*	0	*	1
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	0	0	0

20 — 400

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	4	25
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	2
20<35	0	0	*	1	4	11
10<20	*	*	*	3	8	15
6<10	*	*	1	2	6	8
3<6	*	*	*	1	1	1
1.5<3	*	*	*	*	*	*
0<1.5	*	*	*	1	1	*

21 — 2728

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	2	7	30
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	2
20<35	0	0	*	1	3	9
10<20	*	*	1	3	9	13
6<10	0	*	1	2	5	6
3<6	*	0	*	1	1	1
1.5<3	0	*	0	*	*	*
0<1.5	*	*	*	1	*	*

22 — 2134

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	5	33
50<80	0	0	0	0	*	1
35<50	0	0	*	*	1	2
20<35	0	0	*	3	6	
10<20	0	*	*	2	7	13
6<10	*	0	*	2	6	8
3<6	*	0	*	2	2	1
1.5<3	0	0	*	0	*	*
0<1.5	*	1	1	1	1	*

23 — 986

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	6	37
50<80	0	0	*	0	*	1
35<50	0	0	0	*	*	2
20<35	0	0	*	2	7	
10<20	0	*	*	2	7	12
6<10	*	*	*	2	5	6
3<6	*	*	*	*	2	1
1.5<3	0	0	0	*	1	*
0<1.5	*	*	*	1	1	*

24 — 1134

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	6	34
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	2
20<35	0	*	0	*	1	8
10<20	0	*	*	2	6	14
6<10	*	*	*	2	5	9
3<6	0	*	*	1	1	1
1.5<3	0	0	0	*	*	*
0<1.5	*	*	0	1	*	1

25 — 1494

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	5	23			
50<80	0	*	*			
35<50	*	1	2			
20<35	2	5	8			
10<20	3	13	15			
6<10	3	7	6			
3<6	1	2	1			
1.5<3	*	*	0			
0<1.5	1	1	*			

29 — 2138

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	5	49
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	2
20<35	0	0	0	*	2	9
10<20	0	0	*	*	3	15
6<10	0	0	*	1	3	6
3<6	0	0	*	*	1	1
1.5<3	0	0	0	0	*	*
0<1.5	*	0	0	*	*	*

30 — 1631

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	5	63
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	1
20<35	0	0	0	*	2	7
10<20	0	0	*	0	*	2
6<10	0	0	0	*	1	4
3<6	0	0	*	*	*	1
1.5<3	0	0	*	0	*	*
0<1.5	0	0	0	*	*	*

31 — 2133

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	2	61
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	2
20<35	0	0	*	*	1	7
10<20	*	*	0	*	1	15
6<10	0	0	0	*	1	6
3<6	0	0	*	*	*	1
1.5<3	0	0	*	0	*	*
0<1.5	0	0	0	*	*	*

32 — 3865

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	0	11	40
50<80	0	0	0	0	*	1
35<50	0	0	0	0	4	3
20<35	0	0	*	*	10	11
10<20	0	0	*	*	2	11
6<10	0	0	0	*	1	6
3<6	0	0	*	0	*	*
1.5<3	0	0	0	*	0	*
0<1.5	0	0	0	*	*	*

33 — 1664

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	9	65
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	0	0	*	*	1	4
10<20	0	0	*	1	4	7
6<10	*	0	*	*	2	2
3<6	0	0	0	*	1	*
1.5<3	0	0	0	*	*	*
0<1.5	0	0	0	*	*	*

34 — 4516

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	2	12	51
50<80	0	0	0	*	*	*
35<50	0	0	*	*	*	1
20<35	0	0	*	1	2	5
10<20	0	0	*	2	7	8
6<10	0	*	*	1	3	2
3<6	*	*	*	*	1	*
1.5<3	0	0	*	*	*	*
0<1.5	0	0	*	*	*	*

35 — 5417

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	4	73			
50<80	0	0	*			
35<50	0	0	2			
20<35	0	0	4			
10<20	0	*	8			
6<10	0	1	6			
3<6	0	*	1			
1.5<3	0	0	0			
0<1.5	0	0	0			

39 — 244

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	70
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	7
10<20	0	0	*	0	2	10
6<10	0	0	*	0	*	4
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	0	*

40 — 680

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	67
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	1
20<35	0	0	0	0	*	6
10<20	0	0	0	0	1	10
6<10	0	0	0	0	3	6
3<6	0	0	0	1	*	0
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	*	0

41 — 230

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	42
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	3
20<35	0	0	0	0	*	12
10<20	0	0	0	*	2	22
6<10	0	0	0	*	1	10
3<6	0	0	0	*	*	2
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	*	0	*

42 — 814

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	73
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	2
20<35	0	0	0	0	*	4
10<20	0	0	0	*	1	9
6<10	0	0	0	0	1	6
3<6	0	0	0	*	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	*

43 — 886

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	11	59
50<80	0	0	0	0	*	*
35<50	0	0	0	0	*	1
20<35	0	0	0	*	2	4
10<20	*	0	*	1	4	8
6<10	0	0	*	1	2	3
3<6	0	0	*	*	1	*
1.5<3	0	0	*	*	*	*
0<1.5	*	0	0	*	*	*

44 — 2134

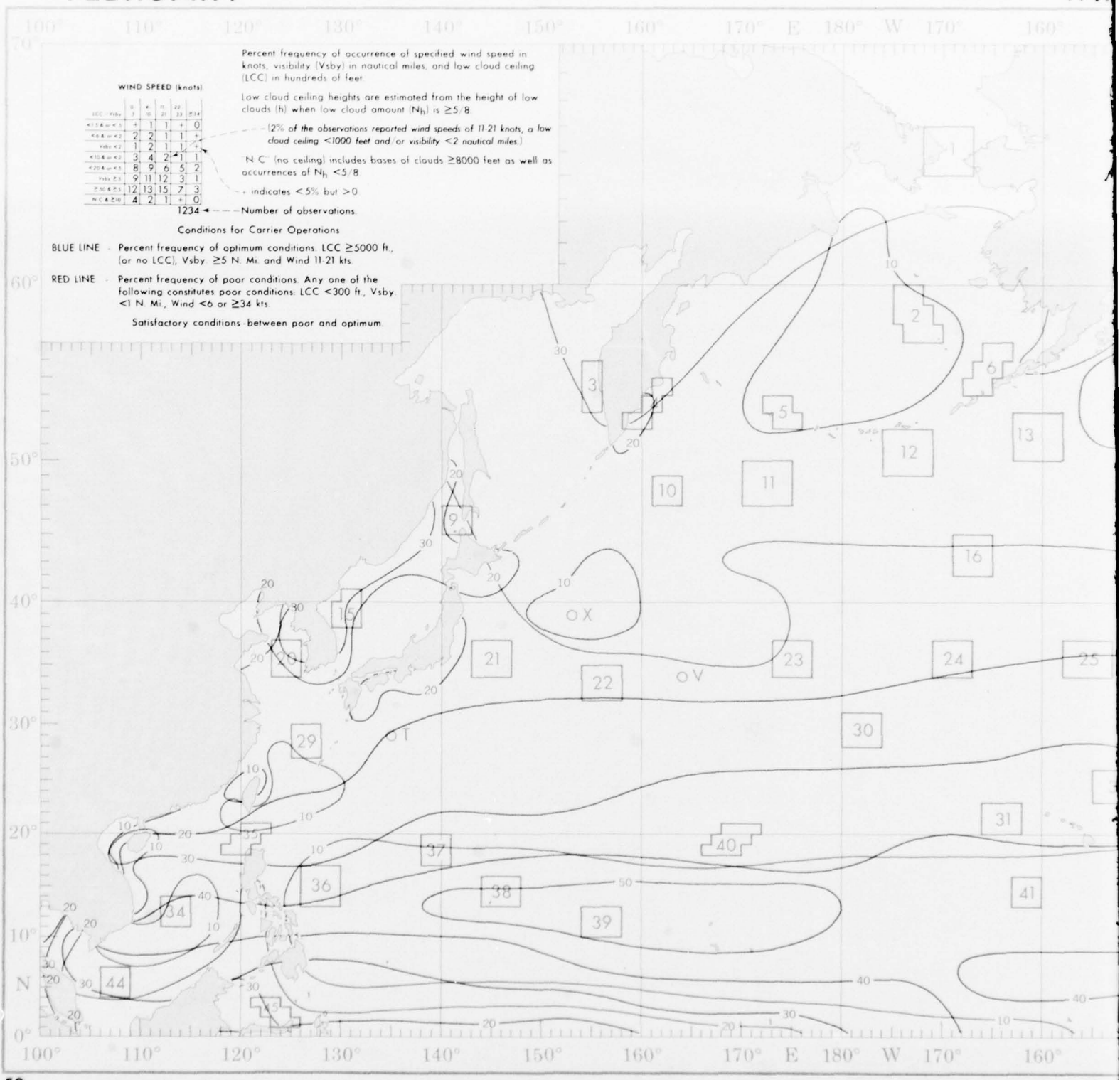
LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	70
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	2
10<20	0	0	0	0	0	13
6<10	0	0	0	0	0	9
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

45 — 54

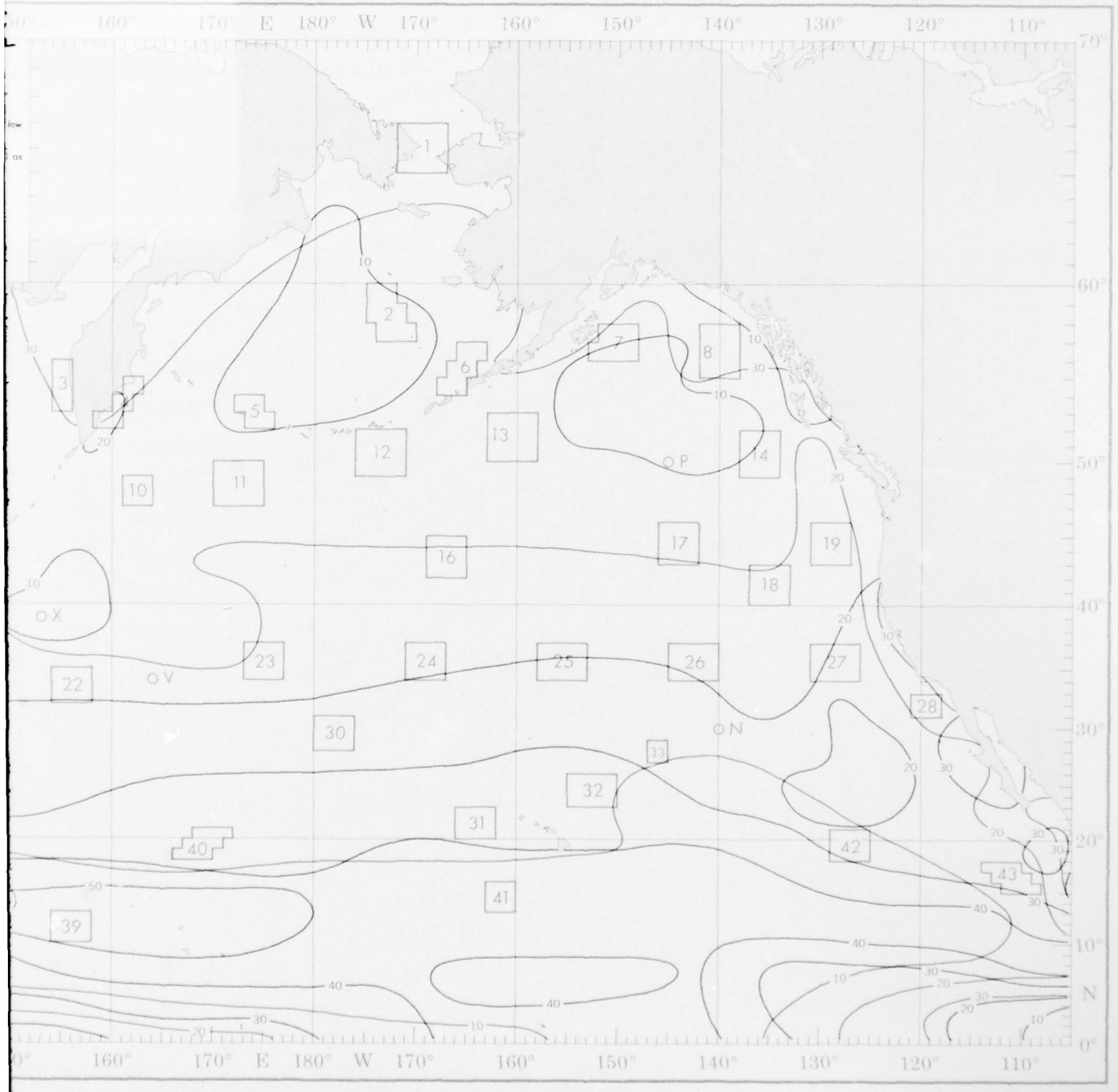
jective compilation of available data for specified areas without regard to suspected biases.
posite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY

WIN



WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	1	+	+
<20 & OR <5	+	2	5	2	1
VSBY ≥5	4	26	51	16	1
≥50 & ≥5	3	13	21	6	1
NC & ≥10	3	12	19	5	+

4638

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	6	5	3
VSBY <2	+	2	4	3	2
<10 & OR <2	+	3	7	8	4
<20 & OR <5	1	6	17	21	11
VSBY ≥5	1	9	25	28	10
≥50 & ≥5	1	4	10	10	3
NC & ≥10	+	1	3	2	1

5110

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	+	+	+	0
<20 & OR <5	+	+	2	4	1
VSBY ≥5	2	11	52	29	3
≥50 & ≥5	1	8	37	16	2
NC & ≥10	1	8	34	14	2

653

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	6	0	+	0	+
<6 & OR <2	0	+	+	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	0	+	+	1	+
<20 & OR <5	+	1	5	7	4
VSBY ≥5	2	13	36	36	11
≥50 & ≥5	1	8	18	14	4
NC & ≥10	1	7	17	13	3

3384

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<6 & OR <2	0	0	+	1	2
VSBY <2	0	0	+	1	1
<10 & OR <2	0	+	+	1	2
<20 & OR <5	+	1	6	10	10
VSBY ≥5	1	7	25	34	15
≥50 & ≥5	1	4	12	17	5
NC & ≥10	1	3	9	8	2

995

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	25	0	0
<6 & OR <2	0	0	25	8	0
VSBY <2	0	0	25	8	0
<10 & OR <2	0	8	25	8	0
<20 & OR <5	8	42	25	8	0
VSBY ≥5	8	17	8	8	0
≥50 & ≥5	0	0	8	8	0
NC & ≥10	0	0	0	8	0

12

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	4	1
<6 & OR <2	+	1	5	8	3
VSBY <2	+	1	4	6	3
<10 & OR <2	+	2	8	10	4
<20 & OR <5	1	6	23	20	7
VSBY ≥5	2	14	38	18	4
≥50 & ≥5	1	7	16	6	1
NC & ≥10	1	6	14	4	1

2318

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	+	1
<6 & OR <2	+	2	6	3	2
VSBY <2	+	1	3	1	1
<10 & OR <2	+	3	14	8	3
<20 & OR <5	1	7	22	15	7
VSBY ≥5	2	16	41	17	9
≥50 & ≥5	2	9	17	6	5
NC & ≥10	2	8	13	6	4

255

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	2	2	1
<6 & OR <2	1	2	6	4	1
VSBY <2	1	2	2	3	1
<10 & OR <2	2	4	16	9	4
<20 & OR <5	2	8	27	15	7
VSBY ≥5	4	17	42	15	8
≥50 & ≥5	2	8	17	4	1
NC & ≥10	2	8	14	3	1

317

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	5	4	0
<6 & OR <2	1	5	15	7	+
VSBY <2	1	3	14	7	+
<10 & OR <2	1	5	17	8	+
<20 & OR <5	1	9	25	16	1
VSBY ≥5	2	16	30	12	0
≥50 & ≥5	1	8	10	3	0
NC & ≥10	0	6	8	2	0

212

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	3	3
<6 & OR <2	0	1	3	4	5
VSBY <2	0	1	2	3	5
<10 & OR <2	+	2	5	6	6
<20 & OR <5	+	6	16	15	10
VSBY ≥5	1	18	40	18	4
≥50 & ≥5	+	9	14	4	+
NC & ≥10	+	5	8	1	0

961

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	4	5	2
<6 & OR <2	+	2	6	8	5
VSBY <2	+	1	3	6	3
<10 & OR <2	+	4	11	14	7
<20 & OR <5	1	9	22	22	10
VSBY ≥5	1	15	28	19	6
≥50 & ≥5	+	9	12	6	1
NC & ≥10	+	7	9	3	+

1331

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	3	2	2
<6 & OR <2	+	+	4	4	2
VSBY <2	+	+	2	2	2
<10 & OR <2	+	2	10	7	4
<20 & OR <5	+	6	19	16	8
VSBY ≥5	+	11	34	27	10
≥50 & ≥5	+	5	16	12	5
NC & ≥10	+	5	10	5	1

753

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	3	1
<6 & OR <2	+	3	7	5	2
VSBY <2	+	2	4	3	1
<10 & OR <2	+	6	14	12	3
<20 & OR <5	1	10	26	18	5
VSBY ≥5	+	17	37	21	5
≥50 & ≥5	+	8	12	7	2
NC & ≥10	+	7	10	5	1

721

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	4	2	1
VSBY <2	+	1	2	1	+
<10 & OR <2	+	4	8	5	2
<20 & OR <5	1	9	24	11	3
VSBY ≥5	2	20	50	16	3
≥50 & ≥5	1	8	17	5	1
NC & ≥10	+	7	14	4	1

1626

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	5	3	1
VSBY <2	+	1	2	1	1
<10 & OR <2	+	4	10	7	2
<20 & OR <5	1	8	21	12	3
VSBY ≥5	2	20	43	20	3
≥50 & ≥5	1	9	16	6	1
NC & ≥10	1	8	13	4	1

1436

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	1	1	0
<10 & OR <2	+	1	3	1	0
<20 & OR <5	+	3	10	6	1
VSBY ≥5	3	25	48	19	2
≥50 & ≥5	3	19	31	8	1
NC & ≥10	2	14	24	6	1

395

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	+	1	3	3	2
VSBY <2	0	+	1	1	1
<10 & OR <2	+	2	9	10	4
<20 & OR <5	+	6	22	19	6
VSBY ≥5	1	13	38	28	8
≥50 & ≥5	1	6	13	7	2
NC & ≥10	1	6	11	6	2

2719

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	+	1	2	2	+
VSBY <2	0	+	1	1	+
<10 & OR <2	1	4	10	5	1
<20 & OR <5	1	12	24	10	3
VSBY ≥5	3	24	45	18	4
≥50 & ≥5	1	9	18	7	2
NC & ≥10	1	8	16	6	1

1800

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	3	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	1	5	8	4	+
<20 & OR <5	1	12	20	7	1
VSBY ≥5	4	28	46	15	1
≥50 & ≥5	2	13	21	7	1
NC & ≥10	2	12	19	6	+

4547

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	1	2	2	+	+
VSBY <2	1	2	1	+	0
<10 & OR <2	1	4	4	1	+
<20 & OR <5	2	9	10	1	+
VSBY ≥5	8	40	38	8	1
≥50 & ≥5	6	30	26	6	1
NC & ≥10	4	20	19	4	1

3821

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	3	+
VSBY <2	+	+	1	1	0
<10 & OR <2	+	3	10	8	+
<20 & OR <5	1	9	28	18	1
VSBY ≥5	2	21	45	18	1
≥50 & ≥5	2	11	13	2	+
NC & ≥10	1	9	11	2	+

2119

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	+
<6 & OR <2	+	+	1	1	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	6	4	1
<20 & OR <5	1	5	16	8	2
VSBY ≥5	3	20	43	21	5
≥50 & ≥5	2	13	26	10	3
NC & ≥10	2	13	24	8	2

1625

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	1	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	3	2	+
<20 & OR <5	+	4	11	5	+
VSBY ≥5	4	30	52	12	+
≥50 & ≥5	3	24	36	5	+
NC & ≥10	3	22	33	4	+

2126

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	2	7	3	+
<20 & OR <5	+	4	14	7	1
VSBY ≥5	2	28	52	12	+
≥50 & ≥5	2	24	37	5	+
NC & ≥10	2	21	32	4	+

3150

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	+	1	2	0	+
VSBY <2	0	0	1	0	+
<10 & OR <2	+	2	7	1	1
<20 & OR <5	+	4	16	4	1
VSBY ≥5	4	33	51	10	1
≥50 & ≥5	4	27	31	5	0
NC & ≥10	3	25	28	5	0

577

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	+	3	12	4	+
VSBY ≥5	1	21	63	11	+
≥50 & ≥5	1	17	48	7	+
NC & ≥10	1	16	44	6	0

1162

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	1	0
VSBY <2	0	0	0	+	0
<10 & OR <2	0	+	7	1	0
<20 & OR <5	0	2	13	3	0
VSBY ≥5	0	12	73	13	0
≥50 & ≥5	0	11	55	10	0
NC & ≥10	0	10	53	10	0

239

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	3	1	+
<20 & OR <5	+	5	9	4	+
VSBY ≥5	8	36	46	8	1
≥50 & ≥5	7	29	33	4	+
NC & ≥10	7	28	32	3	+

679

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	+	0	+
VSBY <2	0	0	0	0	0
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	3	12	6	1
VSBY ≥5	2	23	52	22	1
≥50 & ≥5	1	19	33	15	+
NC & ≥10	1	19	31	14	+

215

Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

LITY-WIND

FEBRUARY

V

D SPEED (KNOTS)				
0-3	4-10	11-21	22-33	≥34
0	0	+	0	+
0	+	+	+	+
0	+	+	+	+
0	+	+	1	+
+	1	5	7	4
2	13	36	36	11
1	8	18	14	4
1	7	17	13	3

3384

X

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<6 & OR <2	0	0	+	1	2
VSBY <2	0	0	+	1	1
<10 & OR <2	0	+	+	1	2
<20 & OR <5	+	1	6	10	10
VSBY ≥5	1	7	25	34	19
≥50 & ≥5	1	4	12	17	5
NC & ≥10	1	3	9	8	2

995

1

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	25	0	0
<6 & OR <2	0	0	25	8	0
VSBY <2	0	0	25	8	0
<10 & OR <2	0	8	25	8	0
<20 & OR <5	8	42	25	8	0
VSBY ≥5	8	17	8	8	0
≥50 & ≥5	0	0	8	8	0
NC & ≥10	0	0	0	8	0

12

2

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	6	4	2
<6 & OR <2	+	4	17	10	4
VSBY <2	+	3	15	9	4
<10 & OR <2	+	4	18	10	4
<20 & OR <5	1	7	32	18	6
VSBY ≥5	1	9	25	12	1
≥50 & ≥5	1	4	7	3	+
NC & ≥10	+	2	4	2	+

1867

3

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	3	2	1
<6 & OR <2	2	8	8	4	1
VSBY <2	1	7	7	3	1
<10 & OR <2	2	8	9	4	1
<20 & OR <5	3	14	15	6	2
VSBY ≥5	9	31	21	7	1
≥50 & ≥5	7	20	12	4	+
NC & ≥10	6	16	9	3	+

1067

4

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	5	3	2
<6 & OR <2	1	4	8	5	2
VSBY <2	1	4	7	4	2
<10 & OR <2	2	4	9	5	2
<20 & OR <5	3	7	16	7	3
VSBY ≥5	10	16	33	11	3
≥50 & ≥5	7	13	21	6	1
NC & ≥10	7	10	15	5	1

445

5

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	3	2
<6 & OR <2	0	1	2	5	4
VSBY <2	0	1	2	5	4
<10 & OR <2	0	2	4	8	4
<20 & OR <5	1	3	17	19	8
VSBY ≥5	2	15	31	21	5
≥50 & ≥5	2	9	11	4	2
NC & ≥10	2	7	9	3	2

194

9

D SPEED (KNOTS)				
0-3	4-10	11-21	22-33	≥34
1	5	4	0	
5	15	7	+	
3	14	7	+	
5	17	8	+	
9	25	16	1	
15	30	12	0	
8	10	3	0	
6	8	2	0	

212

10

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	3	3
<6 & OR <2	0	1	3	4	5
VSBY <2	0	1	2	3	5
<10 & OR <2	+	2	5	6	6
<20 & OR <5	+	6	16	15	10
VSBY ≥5	1	18	40	18	4
≥50 & ≥5	+	9	14	4	+
NC & ≥10	+	5	8	1	0

961

11

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	4	5	2
<6 & OR <2	+	2	6	8	5
VSBY <2	+	1	3	6	3
<10 & OR <2	+	4	11	14	7
<20 & OR <5	1	9	22	22	10
VSBY ≥5	1	16	28	19	6
≥50 & ≥5	+	9	12	6	1
NC & ≥10	+	7	9	3	+

1331

12

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	4
<6 & OR <2	+	3	5	4	6
VSBY <2	0	1	3	2	4
<10 & OR <2	+	6	13	11	8
<20 & OR <5	1	10	24	20	11
VSBY ≥5	1	16	31	18	6
≥50 & ≥5	+	8	12	5	2
NC & ≥10	+	6	8	2	1

1030

13

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	4	3	2
<6 & OR <2	+	5	8	7	3
VSBY <2	+	3	3	4	2
<10 & OR <2	1	7	16	12	5
<20 & OR <5	1	10	27	19	7
VSBY ≥5	2	13	33	19	5
≥50 & ≥5	1	6	11	6	1
NC & ≥10	1	4	8	4	+

919

14

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	2	+
<6 & OR <2	1	3	7	6	1
VSBY <2	1	2	4	3	1
<10 & OR <2	1	5	12	10	2
<20 & OR <5	1	10	25	19	3
VSBY ≥5	2	13	34	22	4
≥50 & ≥5	1	6	12	5	1
NC & ≥10	+	5	9	4	+

1649

15

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	1	0
VSBY <2	0	+	1	1	0
<10 & OR <2	0	+	2	2	0
<20 & OR <5	+	2	9	4	0
VSBY ≥5	4	24	51	17	+
≥50 & ≥5	3	20	34	9	+
NC & ≥10	2	9	16	5	+

764

19

D SPEED (KNOTS)				
0-3	4-10	11-21	22-33	≥34
1	2	1	+	
2	5	3	1	
1	2	1	1	
4	10	7	2	
8	21	12	3	
20	43	20	3	
9	16	6	1	
8	13	4	1	

1436

20

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	0	1	1	0
<10 & OR <2	+	1	3	1	0
<20 & OR <5	+	3	10	6	1
VSBY ≥5	3	25	48	19	2
≥50 & ≥5	3	19	31	8	1
NC & ≥10	2	14	24	6	1

395

21

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	+	1	3	3	2
VSBY <2	0	+	1	1	1
<10 & OR <2	+	2	9	10	4
<20 & OR <5	+	6	22	19	6
VSBY ≥5	1	13	38	28	8
≥50 & ≥5	1	9	13	7	2
NC & ≥10	1	6	11	6	2

2719

22

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	3	2
VSBY <2	+	+	1	1	1
<10 & OR <2	+	2	7	7	5
<20 & OR <5	1	6	17	18	8
VSBY ≥5	1	13	37	28	8
≥50 & ≥5	1	7	17	10	3
NC & ≥10	1	6	14	8	2

2121

23

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	0	1	4	4	2
VSBY <2	0	+	1	1	1
<10 & OR <2	0	3	10	8	4
<20 & OR <5	0	6	20	16	8
VSBY ≥5	1	15	36	26	10
≥50 & ≥5	+	8	14	12	4
NC & ≥10	+	8	13	10	3

985

24

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	4	2	1
VSBY <2	0	1	1	+	1
<10 & OR <2	+	4	10	6	2
<20 & OR <5	+	6	19	14	4
VSBY ≥5	1	16	42	25	6
≥50 & ≥5	1	9	20	11	3
NC & ≥10	1	8	18	9	2

1125

25

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	1	4	2	1
VSBY <2	0	+	1	1	1
<10 & OR <2	+	4	11	6	2
<20 & OR <5	1	9	21	13	3
VSBY ≥5	2	22	43	20	4
≥50 & ≥5	1	10	21	8	2
NC & ≥10	1	9	17	6	1

1488

29

D SPEED (KNOTS)				
0-3	4-10	11-21	22-33	≥34
+	+	1	1	+
+	1	3	3	+
+	+	1	1	0
1	9	28	18	1
2	21	45	18	1
2	11	13	2	+
1	9	11	2	+

2119

30

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	+
<6 & OR <2	+	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	6	4	1
<20 & OR <5	1	5	16	8	2
VSBY ≥5	3	20	49	21	5
≥50 & ≥5	2	13	26	10	3
NC & ≥10	2	13	24	8	2

1625

31

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	1	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	3	2	+
<20 & OR <5	+	4	11	5	+
VSBY ≥5	4	30	52	12	+
≥50 & ≥5	3	24	36	5	+
NC & ≥10	3	22	33	4	+

2126

32

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	+	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	6	14	5	1
VSBY ≥5	3	27	54	14	1
≥50 & ≥5	2	19	36	7	+
NC & ≥10	2	18	34	7	+

3852

33

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	0	+	+	0
<10 & OR <2	1	2	4	2	+
<20 & OR <5	+	5	11	5	1
VSBY ≥5	3	25	54	15	1
≥50 & ≥5	2	14	28	7	1
NC & ≥10	2	13	20	4	+

1662

34

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	1	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	1	4	2	+
<20 & OR <5	+	2	12	5	+
VSBY ≥5	2	26	57	13	+
≥50 & ≥5	1	23	42	7	+
NC & ≥10	1	22	36	5	+

4491

35

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	1	4	4	1
<20 & OR <5	+	2	12	12	1
VSBY ≥5	3	20	41	26	3
≥50 & ≥5	3	18	27	14	2
NC & ≥10	3	15	22	10	1

5379

39

D SPEED (KNOTS)				
0-3	4-10	11-21	22-33	≥34
0	0	0	0	0
0	0	1	1	0
0	0	0	+	0
0	+	7	1	0
0	2	13	3	0
0	12	73	13	0
0	11	55	10	0
0	10	53	10	0

239

40

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	3	1	+
<20 & OR <5	+	5	9	4	+
VSBY ≥5	8	36	45	8	1
≥50 & ≥5	7	29	33	4	+
NC & ≥10	7	28	32	3	+

679

41

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	+	0	+
VSBY <2	0	0	0	0	0
<10 & OR <2	+	4	10	2	0
<20 & OR <5	+	3	12	6	1
VSBY ≥5	2	23	52	22	1
≥50 & ≥5	1	19	33	15	+
NC & ≥10	1	19	31	14	+

215

42

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	2	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	4	10	2	0
<20 & OR <5	+	10	26	4	0
VSBY ≥5	2	28	61	8	0
≥50 & ≥5	2	16	25	3	0
NC & ≥10	2	15	23	3	0

809

43

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	3	+	0
<20 & OR <5	1	9	9	+	0
VSBY ≥5	7	53	38	1	0
≥50 & ≥5	6	42	26	1	0
NC & ≥10	5	42	25	1	0

875

44

LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	0	1	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	0	2	5	1	+
<20 & OR <5	+	6	14	2	+
VSBY ≥5	4	35	52	5	+
≥50 & ≥5	4	28	35	3	+
NC & ≥10	4	25	29	2	+

2126

45

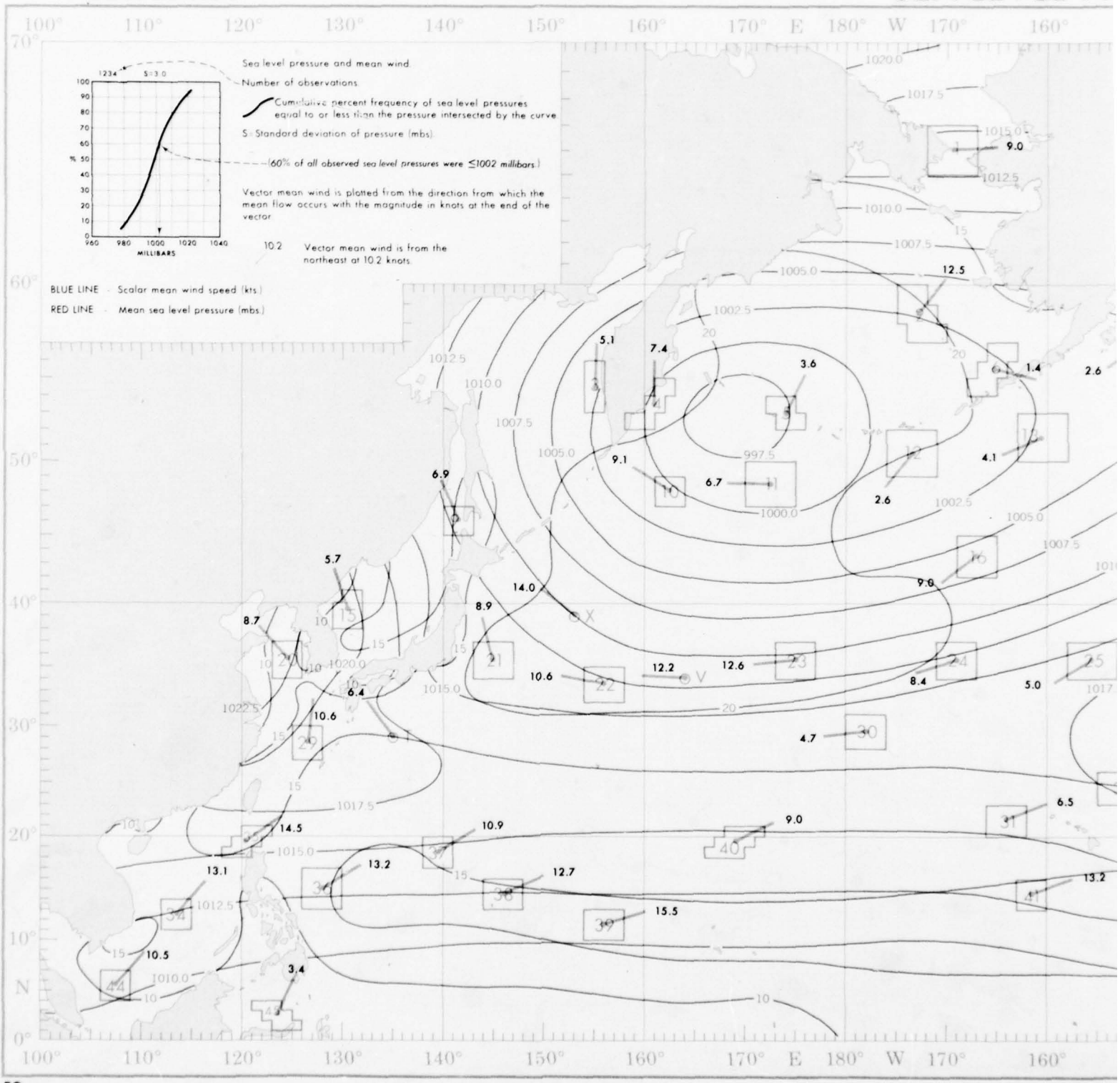
LCC - VSBY	WIND SPEED (KNOTS)				
	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	9	2	0	0
<20 & OR <5	0	19	6	0	0
VSBY ≥5	11	48	41	0	0
≥50 & ≥5	11	28	33	0	0
NC & ≥10	11	26	33	0	0

54

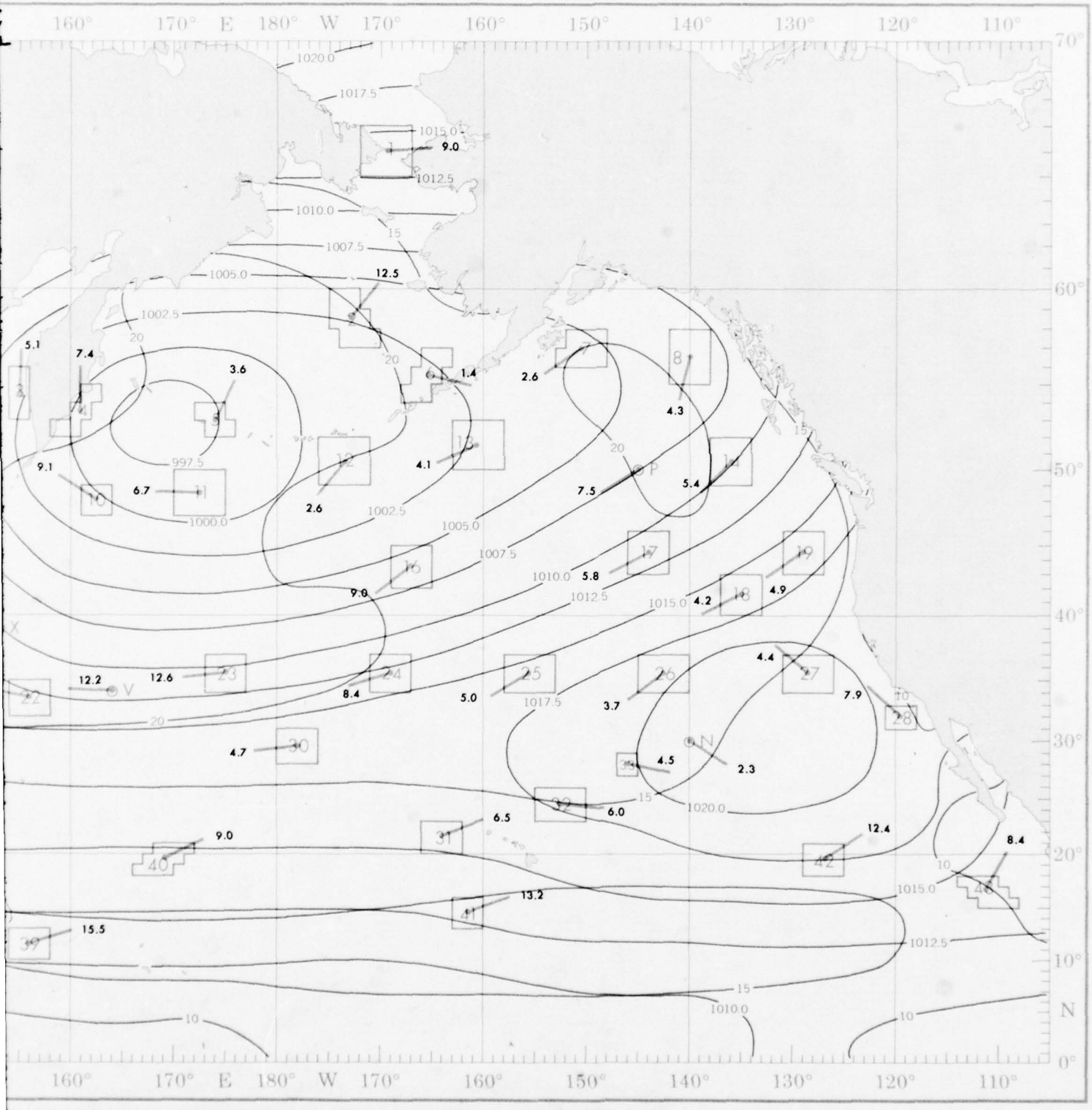
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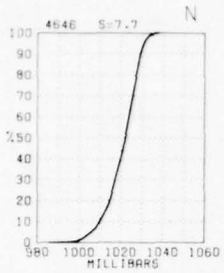
SEA LEVEL PR

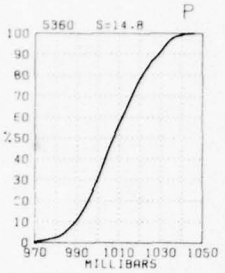


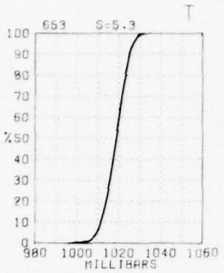
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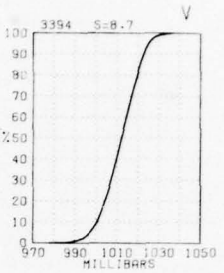


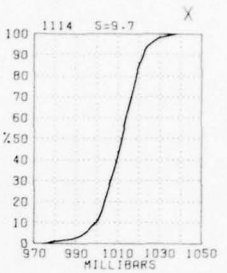
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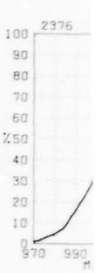


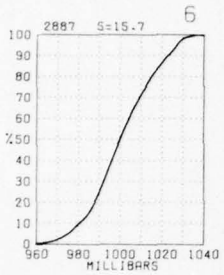


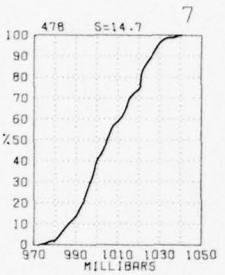


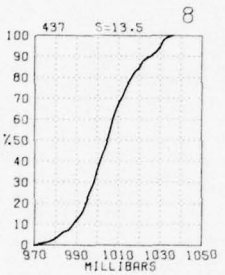


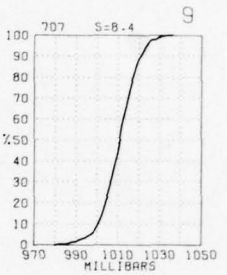
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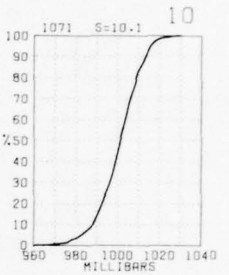


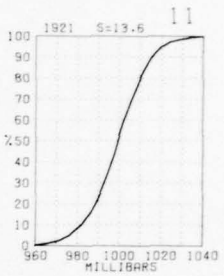


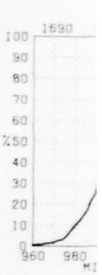


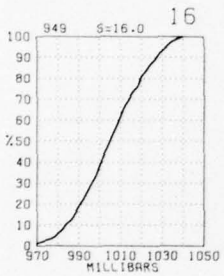


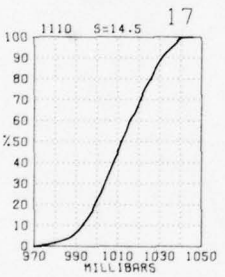


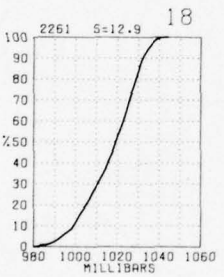


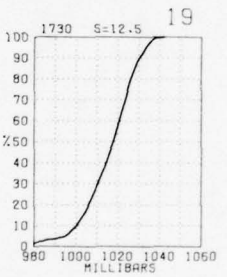


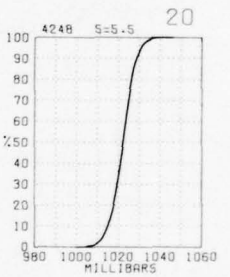


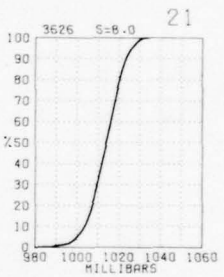


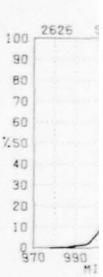


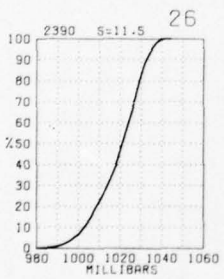


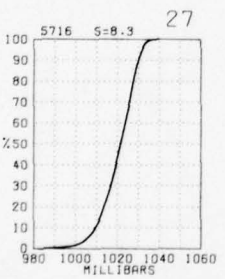


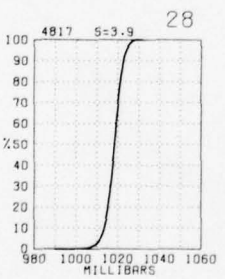


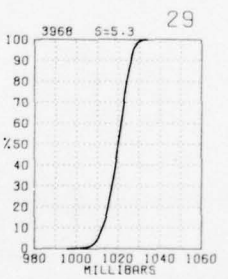


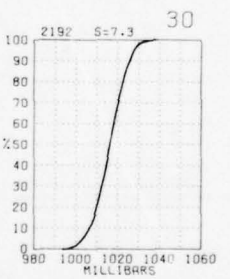


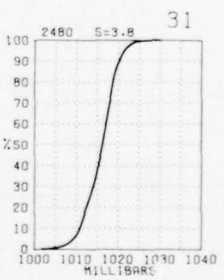


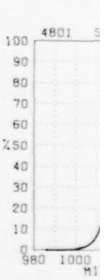


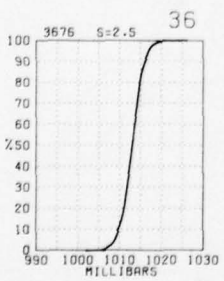


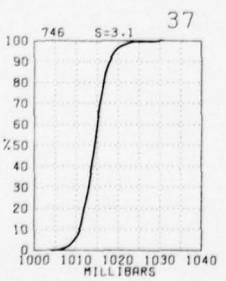


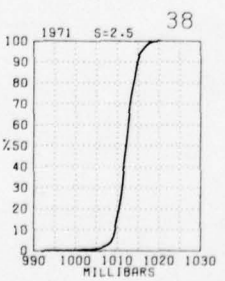


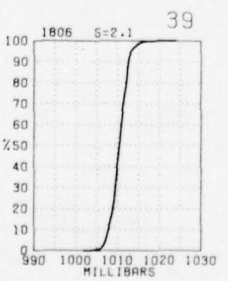


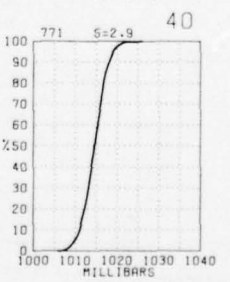


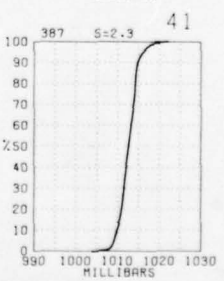


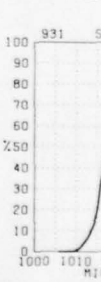






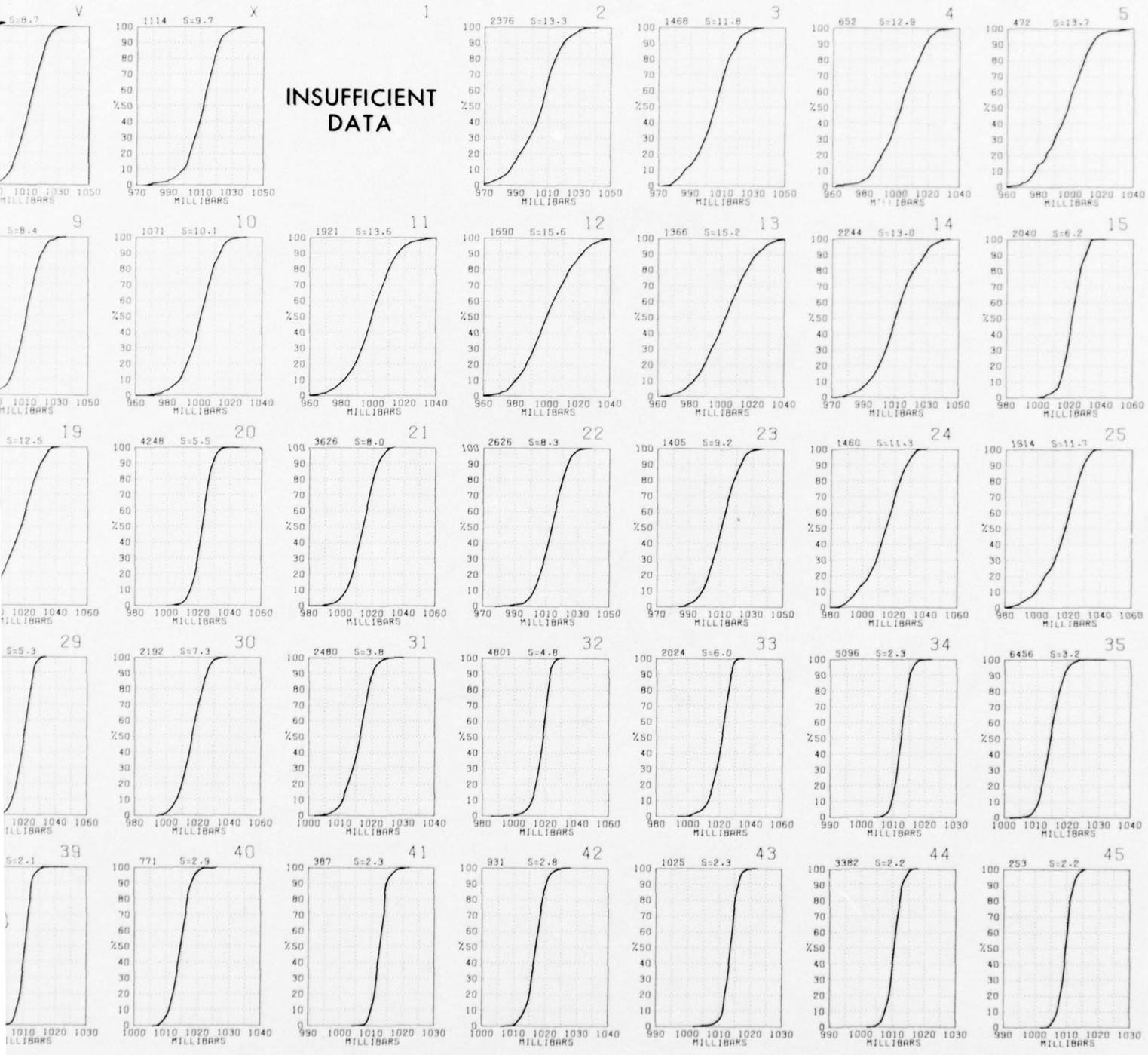






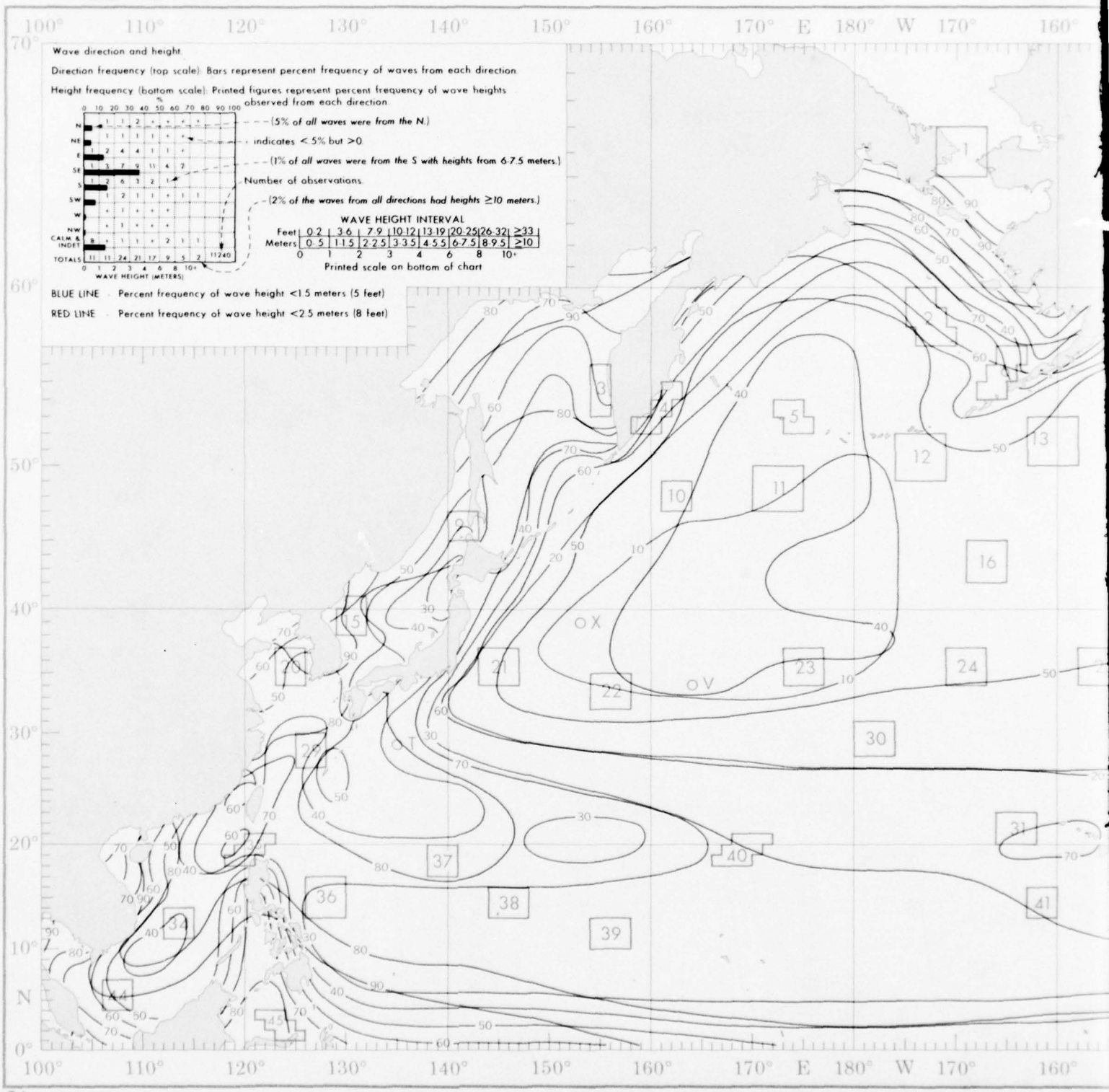
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The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

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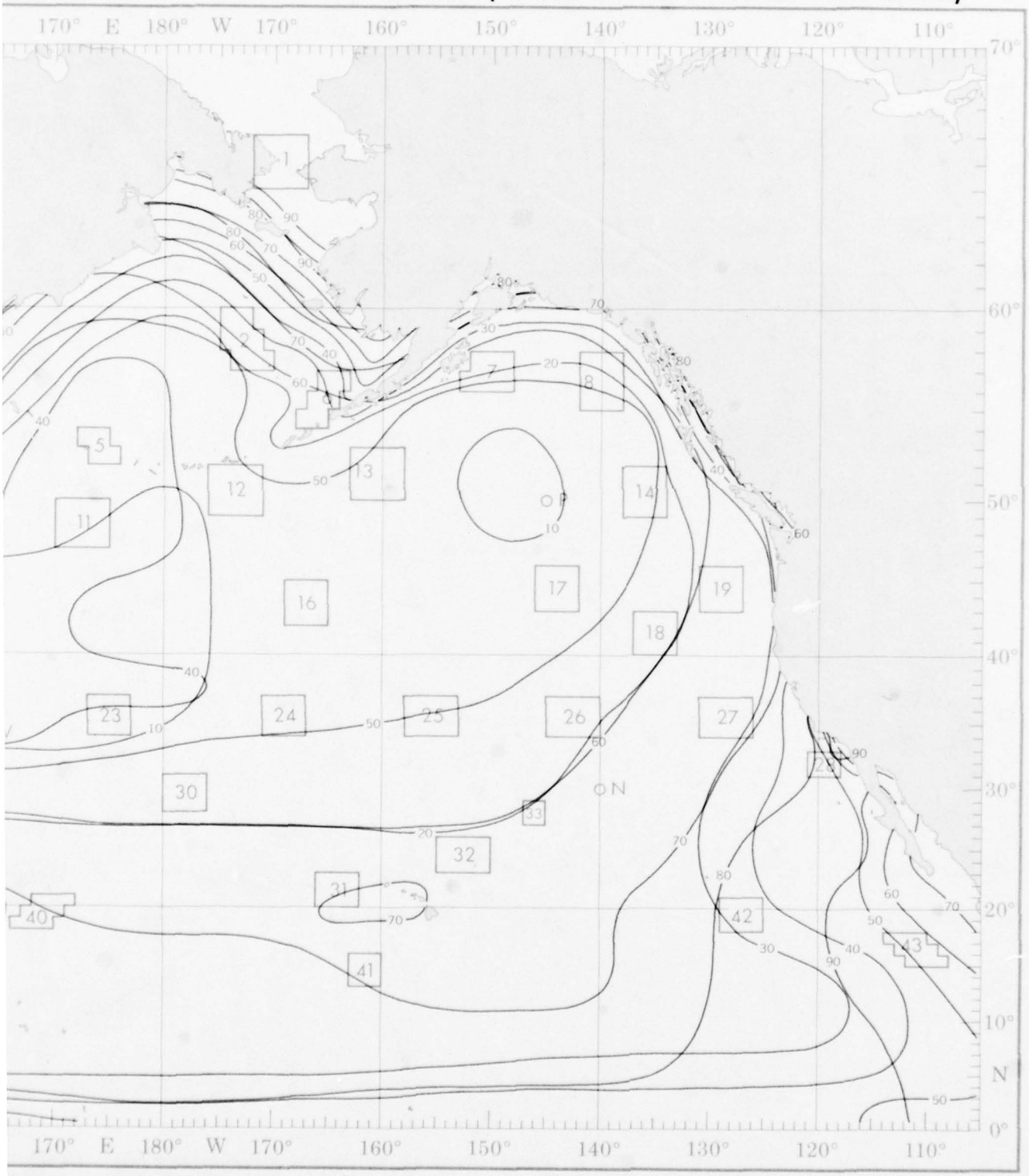


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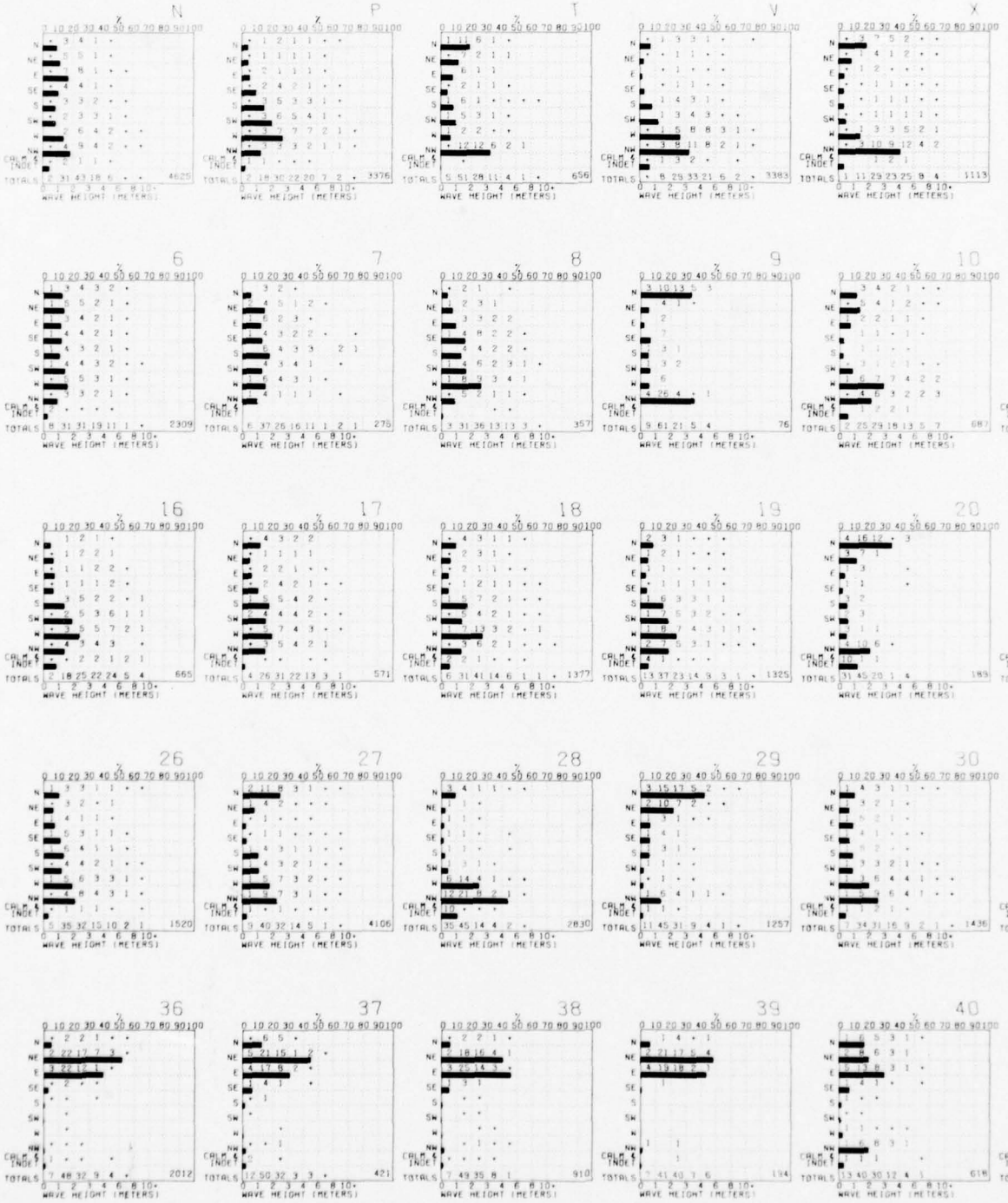
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Wave direction and height.
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
indicates < 5% but > 0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 | 3-6 | 7-9 | 10-12 | 13-19 | 20-25 | 26-32 | ≥33
Meters 0-.5 | 1-1.5 | 2-2.5 | 3-3.5 | 4-5.5 | 6-7.5 | 8-9.5 | ≥10
0 1 2 3 4 6 8 10+
Printed scale on bottom of chart
N
NE
E
SE
S
SW
W
NW
CALM & INDET
TOTALS
11240
WAVE HEIGHT (METERS)
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WAVES (<1.5 AND <2.5 METERS)

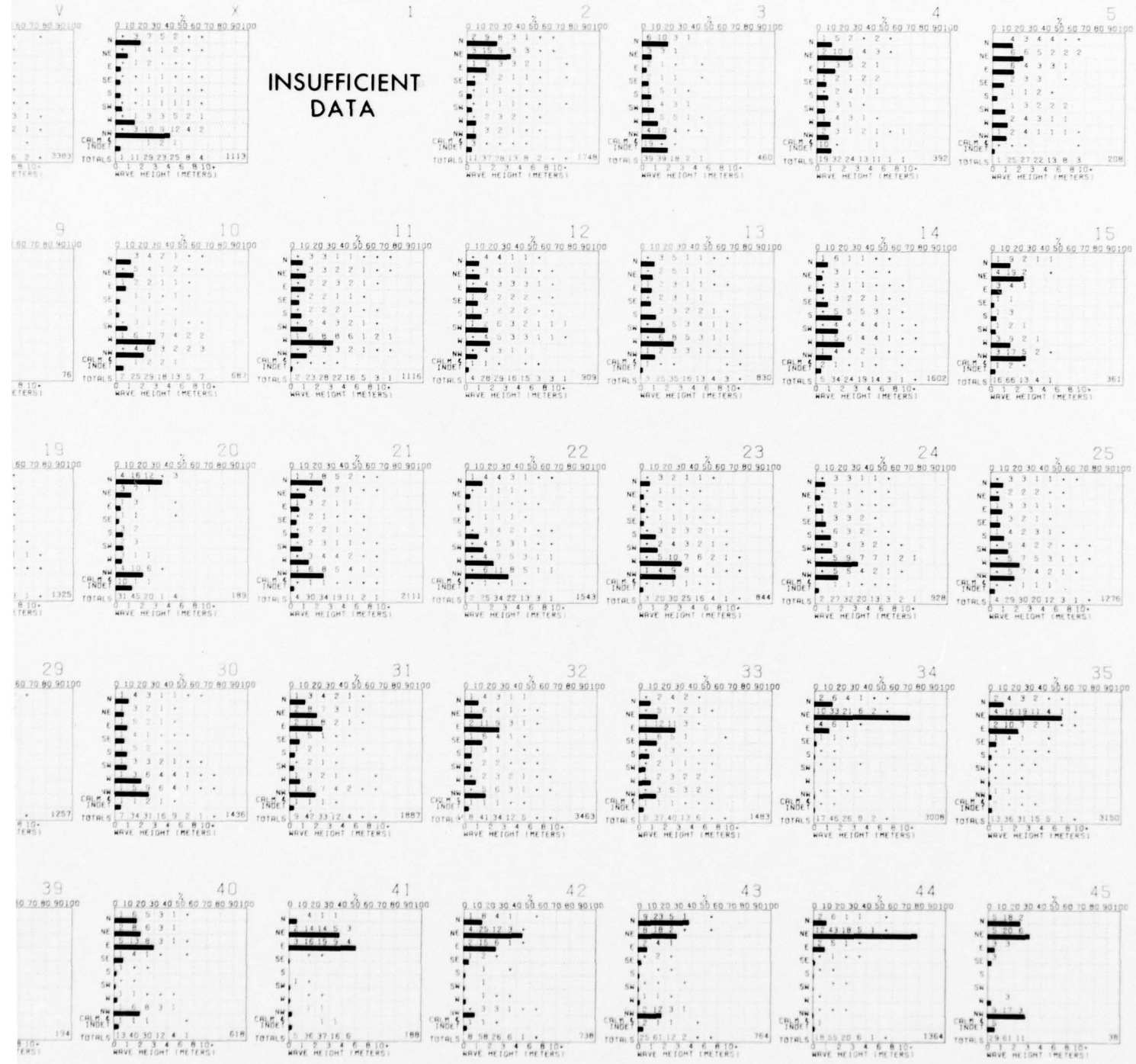


WAVE DIRECTION AND HEIGHT



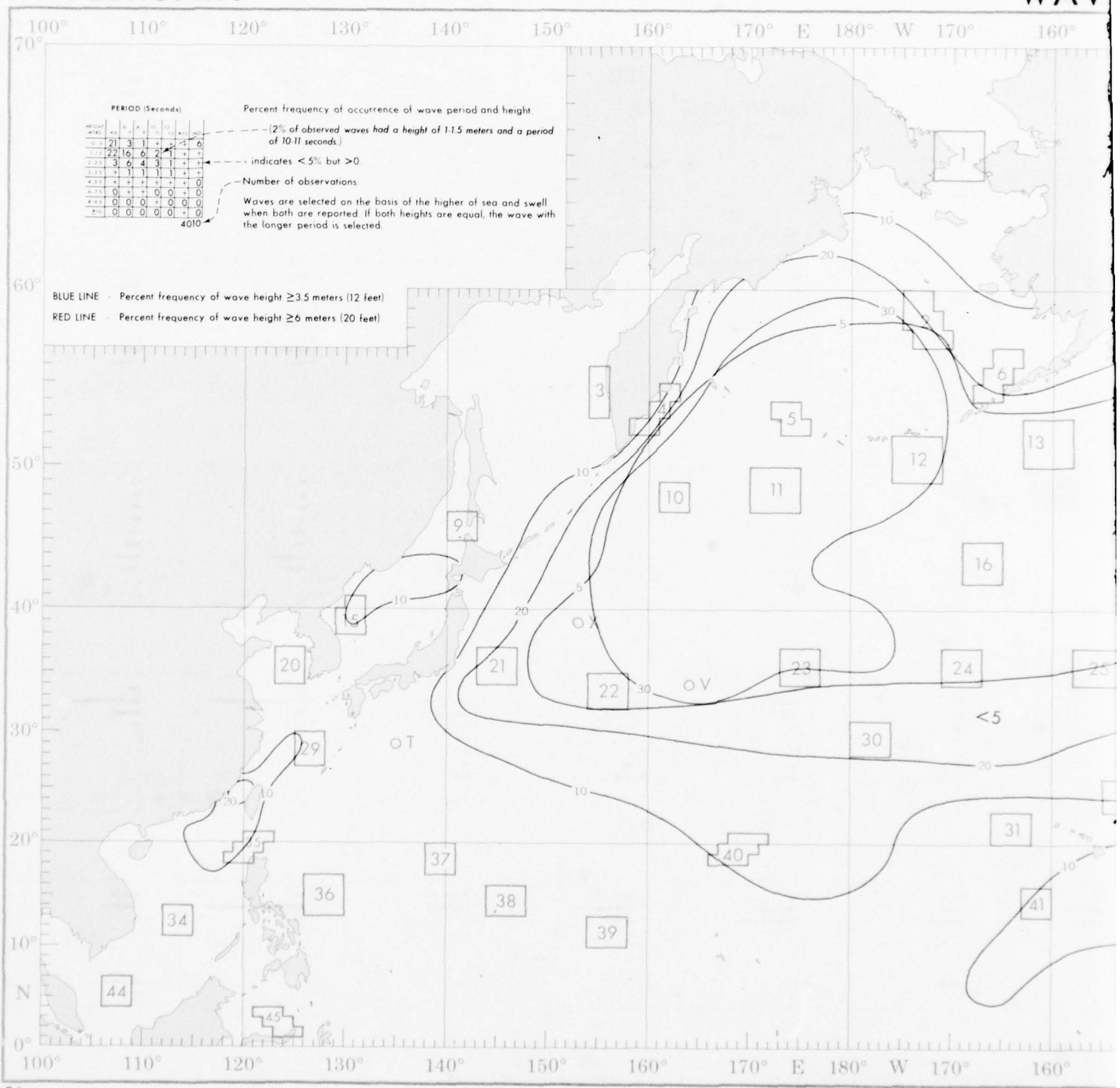
Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

INSUFFICIENT DATA



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)posite page) are based on all available data subjectively adjusted where bias was evident.

FEBRUARY


PERIOD (Seconds)
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1.1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
4010
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
<5

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	8	11	7	2	1	1	2
2-2.5	4	17	14	4	1	1	1
3-3.5	1	4	8	2	1	+	1
4-5.5	+	1	3	1	+	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

4628

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	0	0	0	1
1-1.5	4	8	3	1	+	+	1
2-2.5	1	12	10	4	2	+	+
3-3.5	+	6	10	3	2	1	+
4-5.5	+	4	9	3	2	1	+
6-7.5	0	1	3	2	1	1	0
8-9.5	0	+	1	+	+	+	0
≥10	0	0	0	+	+	+	0

3377

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	2	3	0	0	0	0
1-1.5	1	17	32	1	0	0	0
2-2.5	+	5	20	3	0	0	0
3-3.5	+	3	5	3	+	0	0
4-5.5	0	1	1	2	0	+	0
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

656

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	0	+	0	0	0	+
1-1.5	2	3	3	+	0	+	1
2-2.5	1	8	12	4	+	+	3
3-3.5	+	5	17	7	1	+	2
4-5.5	+	2	11	7	2	+	+
6-7.5	0	+	2	2	1	+	0
8-9.5	0	+	1	1	+	+	+
≥10	0	0	+	+	0	0	0

3383

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	+	+	0	0	0	1
1-1.5	0	4	3	0	0	0	4
2-2.5	0	5	16	1	0	0	7
3-3.5	+	3	17	2	0	0	2
4-5.5	0	2	20	2	+	0	+
6-7.5	0	+	5	2	0	0	0
8-9.5	0	+	2	1	0	0	+
≥10	0	0	0	0	0	0	0

1114

INSUFFICIENT DATA

1

PERIOD

HEIGHT (MTRS)	<6	6-	8-	10-
0-.5	6	1	+	
1-1.5	20	7	3	
2-2.5	10	10	3	
3-3.5	2	6	3	
4-5.5	1	1	4	
6-7.5	0	+	1	
8-9.5	0	0	+	
≥10	0	+	+	

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	+	+	0	0	2
1-1.5	17	7	4	1	+	+	1
2-2.5	12	10	6	2	+	+	1
3-3.5	2	11	4	1	+	+	+
4-5.5	+	4	4	1	+	+	+
6-7.5	0	1	+	+	+	+	0
8-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2329

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	1	0	0	0	+
1-1.5	16	10	7	1	1	+	2
2-2.5	5	12	6	1	+	1	1
3-3.5	1	4	6	3	1	1	1
4-5.5	1	1	3	4	+	+	0
6-7.5	0	0	1	0	0	+	0
8-9.5	0	+	1	+	0	+	0
≥10	0	0	0	0	+	+	0

276

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	0	0	0	+
1-1.5	13	10	4	1	1	+	+
2-2.5	7	14	9	2	2	1	1
3-3.5	3	1	5	2	1	1	0
4-5.5	+	3	4	3	2	1	+
6-7.5	0	0	1	1	1	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

364

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	8
1-1.5	4	4	0	0	0	0	53
2-2.5	0	4	0	0	0	0	17
3-3.5	0	1	0	0	0	0	4
4-5.5	0	0	0	0	0	0	4
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

76

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	0	0	0	1
1-1.5	3	11	10	1	0	0	1
2-2.5	2	7	11	6	1	+	3
3-3.5	+	5	7	3	1	+	2
4-5.5	1	2	3	3	3	+	1
6-7.5	0	+	2	1	1	1	0
8-9.5	0	0	4	2	+	0	0
≥10	0	0	0	0	0	0	0

692

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	0	0	0	+
1-1.5	7	8	5	1	+	0	1
2-2.5	1	9	10	5	1	+	1
3-3.5	1	4	6	6	4	1	+
4-5.5	1	2	5	3	2	2	0
6-7.5	0	1	1	2	+	1	0
8-9.5	0	+	+	0	1	2	+
≥10	0	0	+	0	+	+	0

1123

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	0	0	0	+
1-1.5	7	6	2	1	1	+	1
2-2.5	4	6	8	4	1	0	1
3-3.5	+	5	7	6	2	+	2
4-5.5	+	2	11	6	3	2	1
6-7.5	0	0	1	2	+	+	2
8-9.5	0	1	1	+	1	+	1
≥10	0	0	0	0	0	0	0

670

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	1	0	0	0	+
1-1.5	12	10	2	1	+	0	1
2-2.5	5	11	10	4	1	0	1
3-3.5	2	5	7	5	2	1	1
4-5.5	1	2	4	2	2	1	1
6-7.5	0	+	1	+	1	1	+
8-9.5	0	1	0	0	0	+	0
≥10	0	0	0	0	0	0	0

575

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	2
1-1.5	11	11	5	2	+	+	2
2-2.5	3	16	16	4	1	+	2
3-3.5	+	3	4	3	1	1	1
4-5.5	+	2	2	1	1	1	+
6-7.5	0	+	+	0	+	+	0
8-9.5	0	+	0	1	0	+	0
≥10	0	0	+	0	0	0	0

1382

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	4
1-1.5	18	12	4	1	1	+	1
2-2.5	4	9	5	3	1	1	1
3-3.5	1	3	4	2	2	+	+
4-5.5	+	2	2	2	1	1	+
6-7.5	0	+	1	1	1	1	0
8-9.5	0	+	0	0	+	1	0
≥10	0	+	+	0	+	0	0

1345

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	21	3	0	0	0	0	10
1-1.5	13	22	3	3	1	0	2
2-2.5	1	10	7	0	1	0	1
3-3.5	0	0	1	0	0	0	0
4-5.5	0	1	2	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

195

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	+	0	0	1
1-1.5	12	11	4	1	+	0	1
2-2.5	5	11	11	4	1	+	1
3-3.5	1	3	7	4	2	1	+
4-5.5	+	2	4	3	1	1	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	-	+	+	+	0
≥10	0	0	0	0	0	0	0

2122

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+	+	0	0	1
1-1.5	15	10	5	2	1	+	2
2-2.5	4	10	9	4	2	1	2
3-3.5	1	3	5	2	2	1	1
4-5.5	+	2	3	2	1	1	+
6-7.5	0	+	+	+	1	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	0	0	0

1535

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	2
1-1.5	18	13	5	2	1	+	1
2-2.5	6	11	8	3	1	1	1
3-3.5	1	4	4	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	0	0	0

4181

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	3	1	1	0	0	10
1-1.5	24	11	4	2	1	+	1
2-2.5	3	5	4	2	1	+	+
3-3.5	+	1	1	1	+	+	+
4-5.5	+	1	+	+	+	0	+
6-7.5	0	+	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2888

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	18	18	5	1	+	0	2
2-2.5	4	10	11	4	1	+	1
3-3.5	1	1	3	2	1	0	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

1270

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	0	0	0	0	1
1-1.5	13	12	5	2	1	+	1
2-2.5	4	11	8	4	2	1	2
3-3.5	1	3	4	4	2	1	+
4-5.5	+	1	2	3	1	1	+
6-7.5	0	+	+	1	+	1	+
8-9.5	0	0	+	+	+	+	+
≥10	0	0	0	+	0	0	0

1447

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	1
1-1.5	18	13	6	2	1	+	2
2-2.5	5	10	11	4	1	1	1
3-3.5	1	3	3	3	1	+	+
4-5.5	+	1	2	1	+	+	+
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	+	0	+	0	0
≥10	0	0	0	0	0	0	0

1912

35

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	+	0	0	0	2
1-1.5	18	21	7	1	1	+	+
2-2.5	4	8	14	4	1	+	+
3-3.5	1	2	3	1	2	+	+
4-5.5	+	1	1	+	+	+	+
6-7.5	0	0	+	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2027

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	2
1-1.5	22	20	3	2	1	0	1
2-2.5	6	10	11	2	+	+	+
3-3.5	1	1	0	1	+	+	0
4-5.5	+	1	1	1	0	0	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

432

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	+	0	0	0	1
1-1.5	25	14	7	1	1	+	1
2-2.5	7	13	9	3	1	1	1
3-3.5	1	3	2	1	+	+	+
4-5.5	0	+	1	+	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

919

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	0	1	0	0	0	1
1-1.5	31	5	3	1	0	0	1
2-2.5	8	15	8	5	3	1	0
3-3.5	1	3	2	1	1	0	0
4-5.5	0	1	1	3	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

194

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	+	+	0	0	2
1-1.5	19	10	6	2	1	+	1
2-2.5	5	8	9	4	1	1	1
3-3.5	2	4	3	2	1	+	0
4-5.5	0	+	2	+	1	+	+
6-7.5	0	0	0	+	0	+	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

629

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	0	0	0	0	1
1-1.5	14	12	9	1	0	0	0
2-2.5	10	11	13	2	1	0	1
3-3.5	3	5	4	3	0	2	1
4-5.5	4	1	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

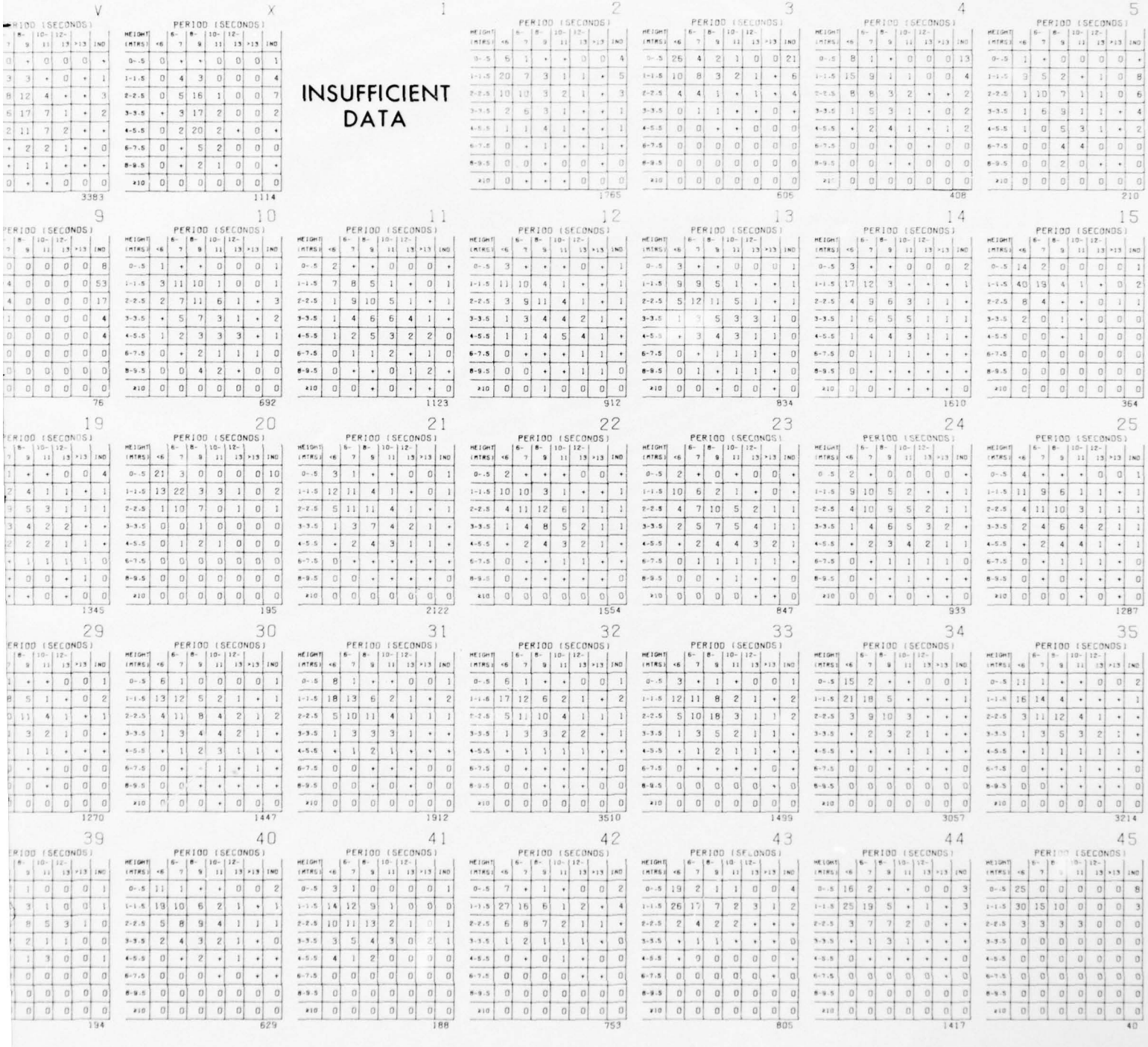
188

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

T

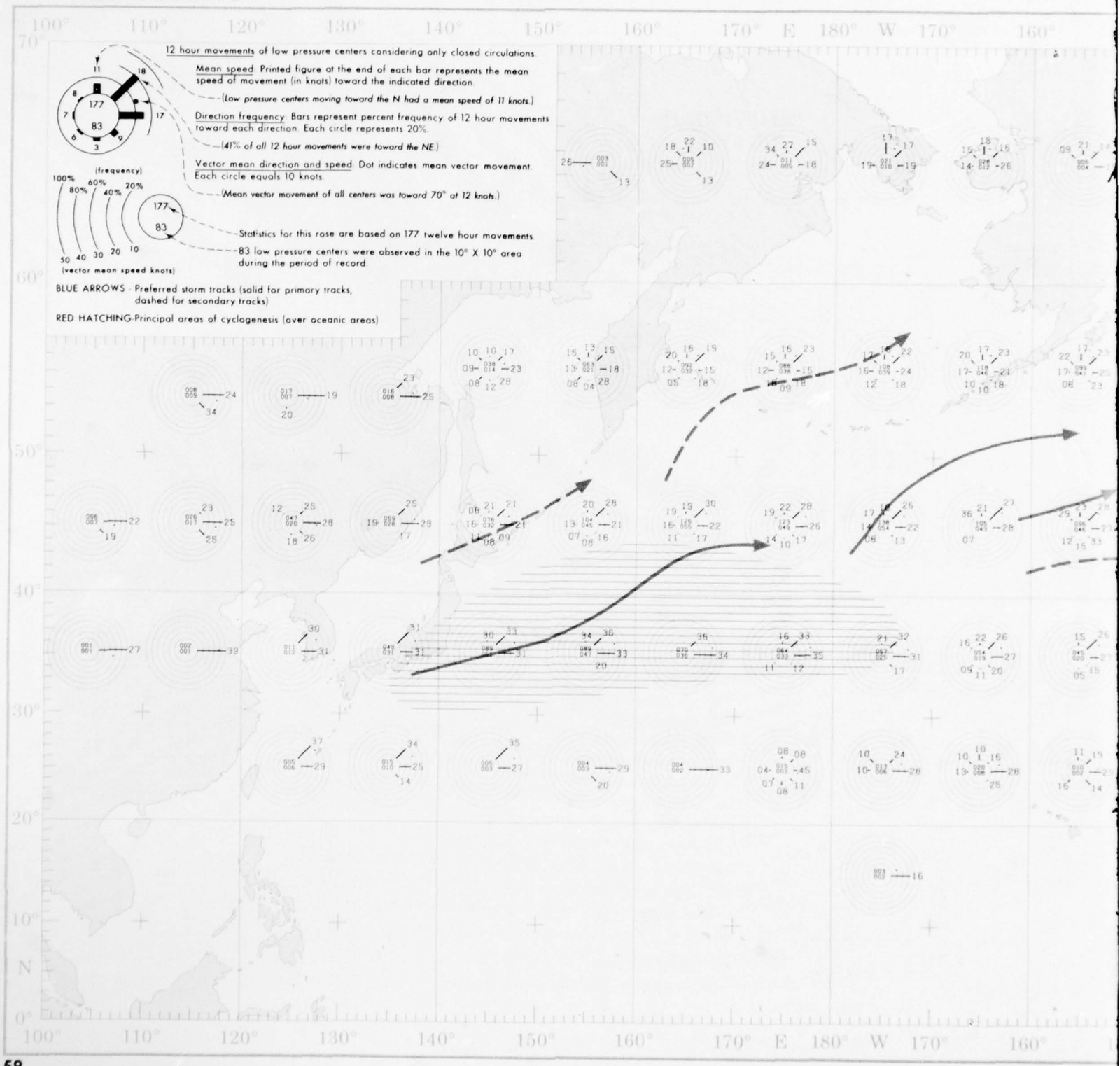
FEBRUARY

INSUFFICIENT DATA

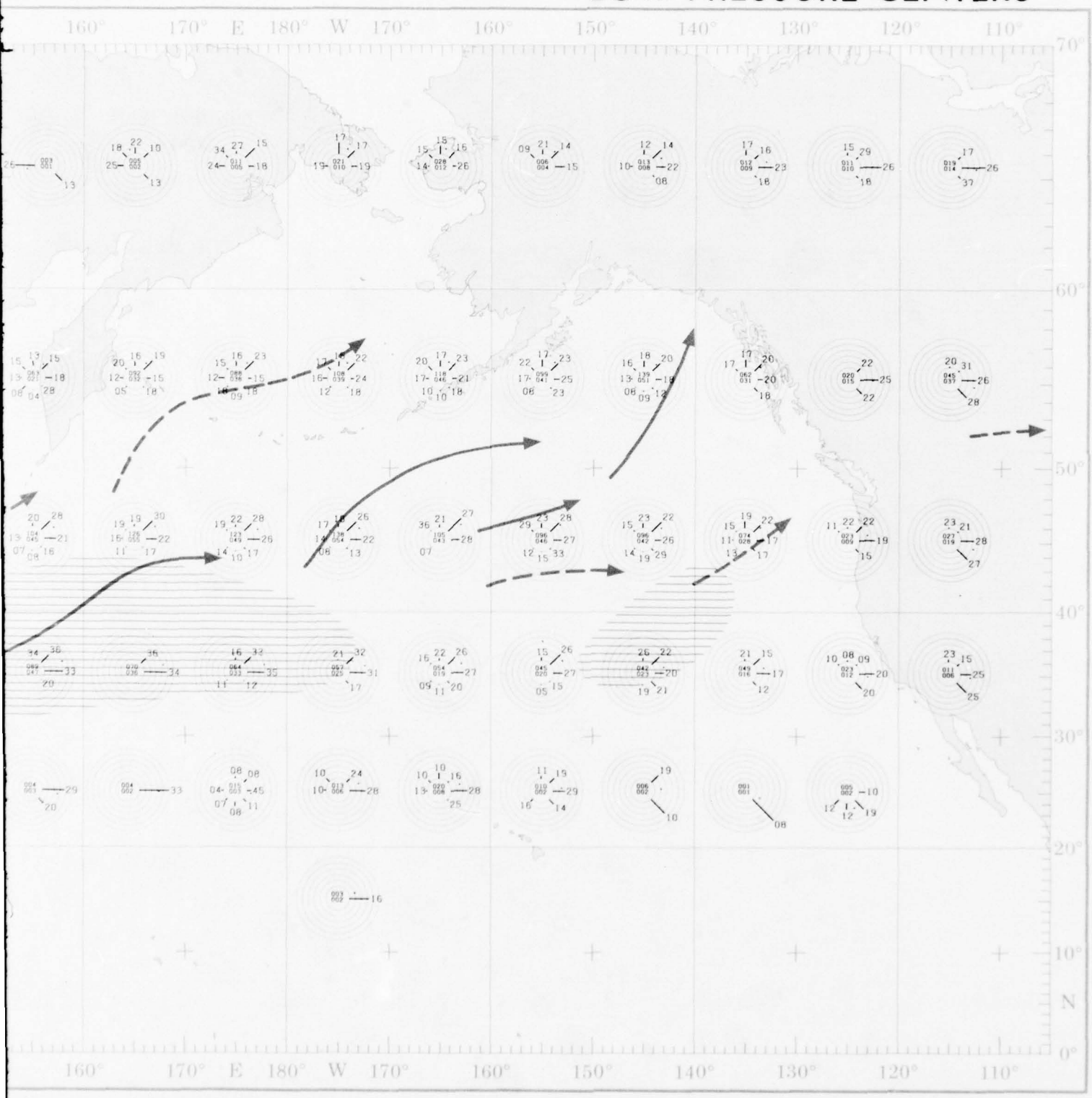


the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

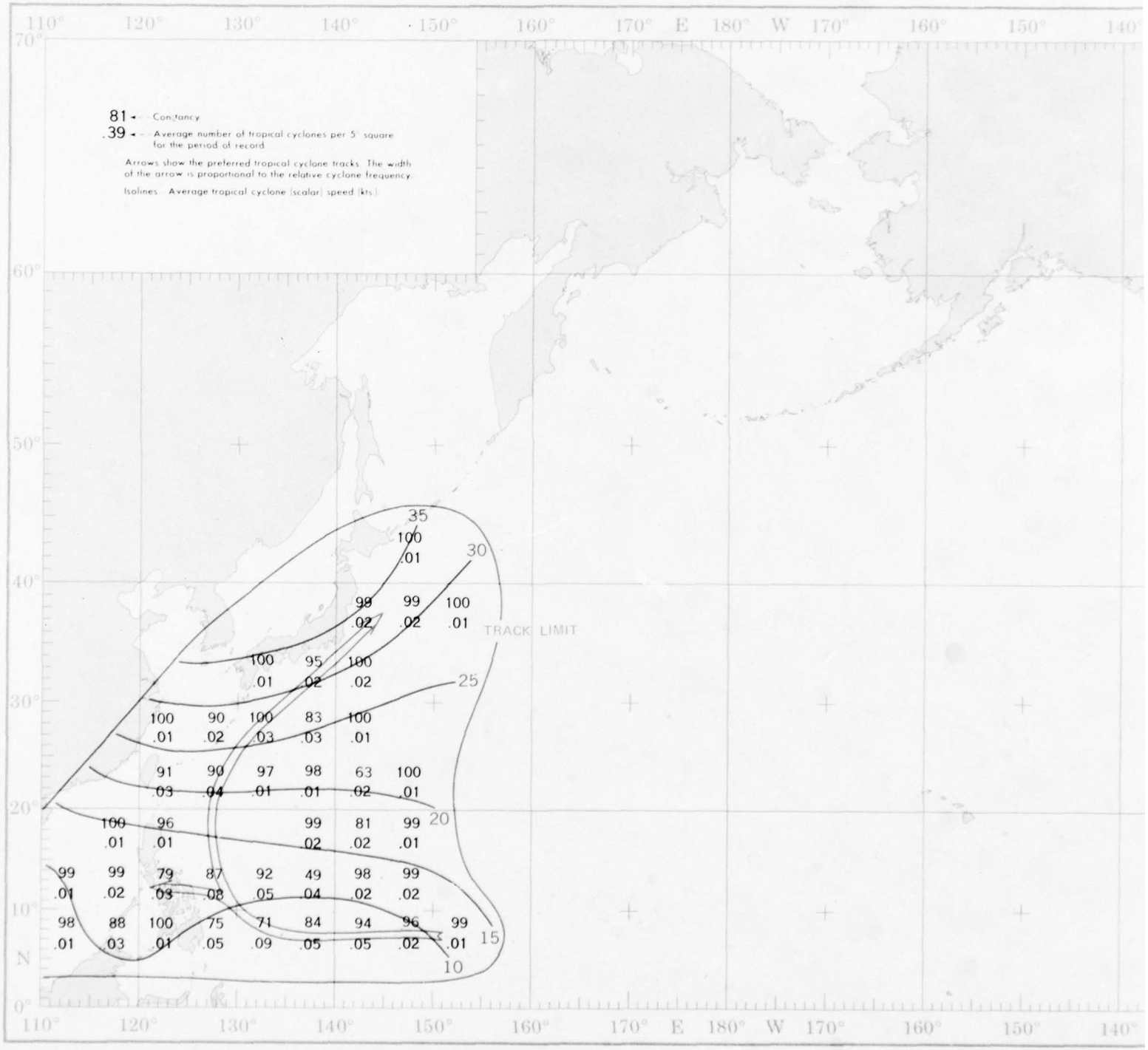
FEBRUARY


12 hour movements of low pressure centers considering only closed circulations.
Mean speed. Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency. Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed. Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

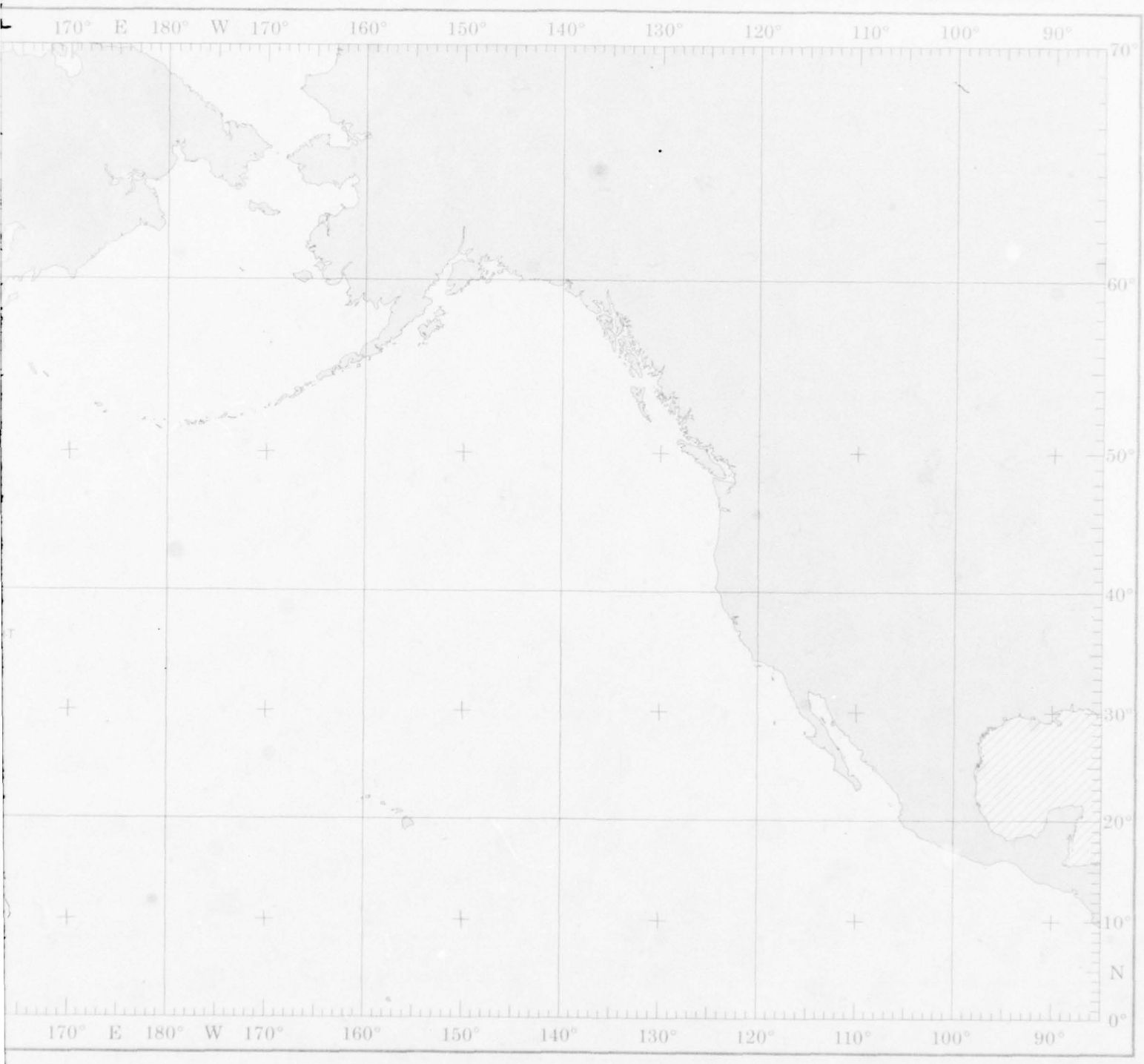
LOW PRESSURE CENTERS



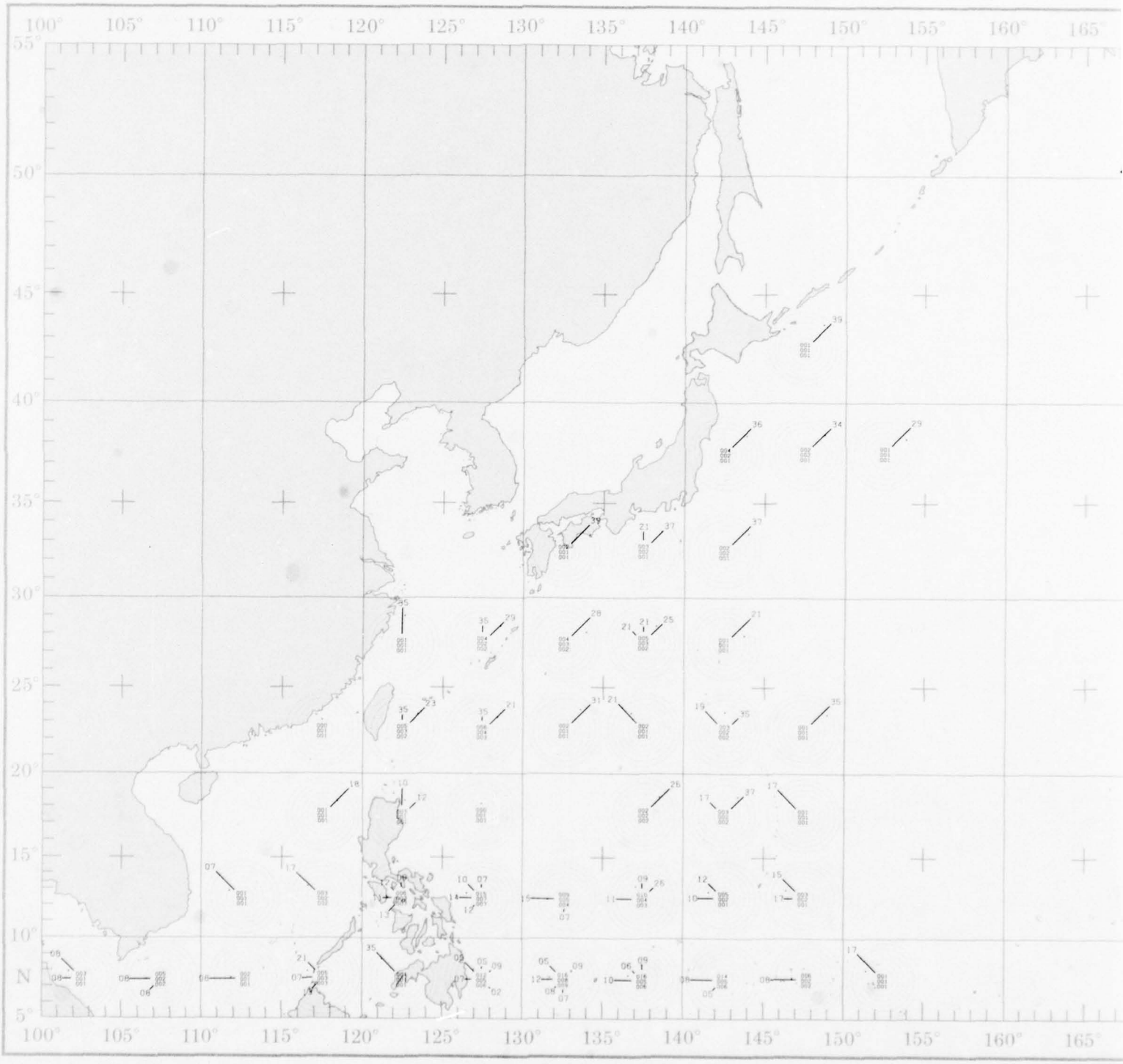
TROPICAL CYCLONE CHARACTERISTICS



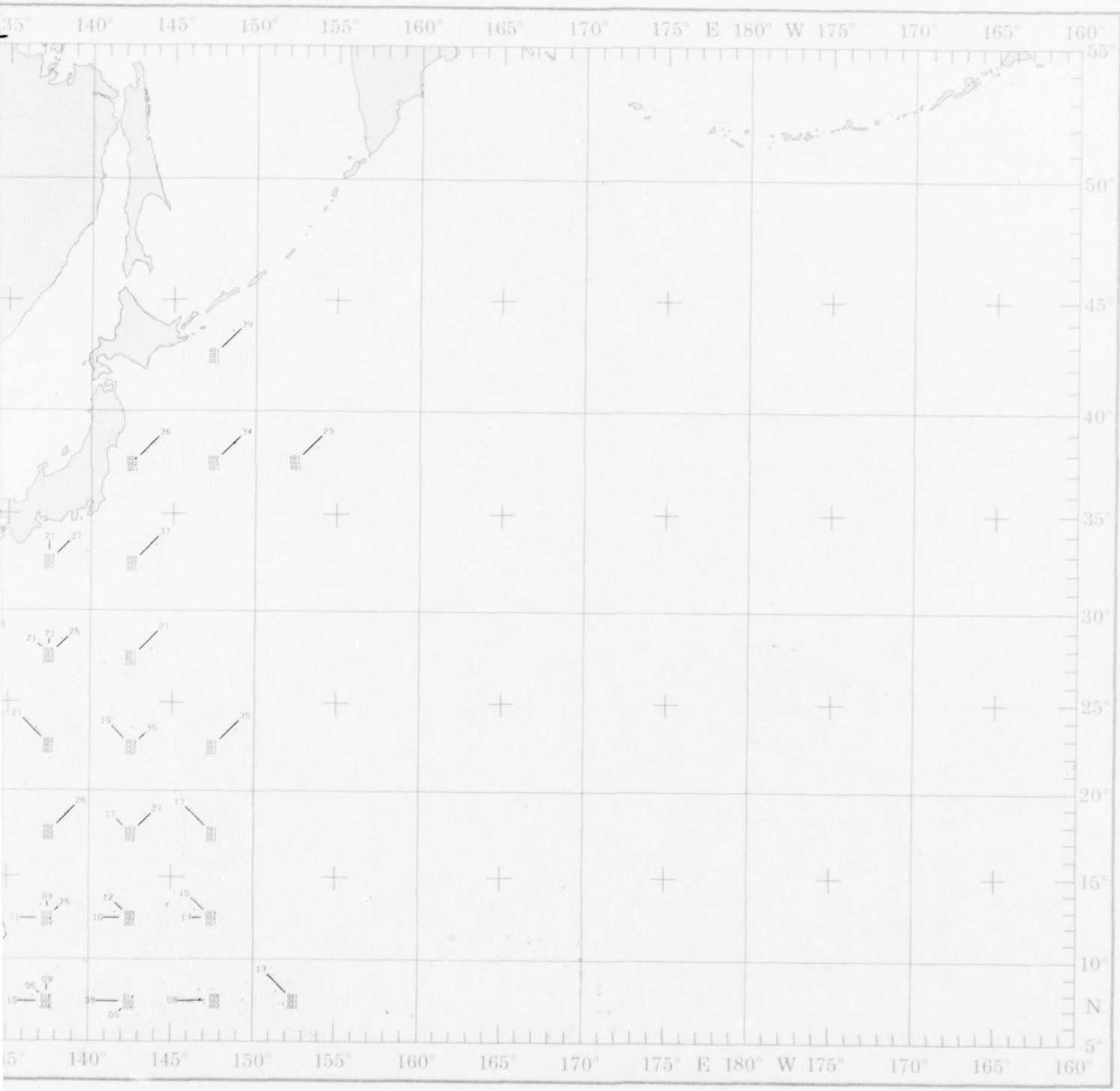
FEBRUARY


170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
N
0°

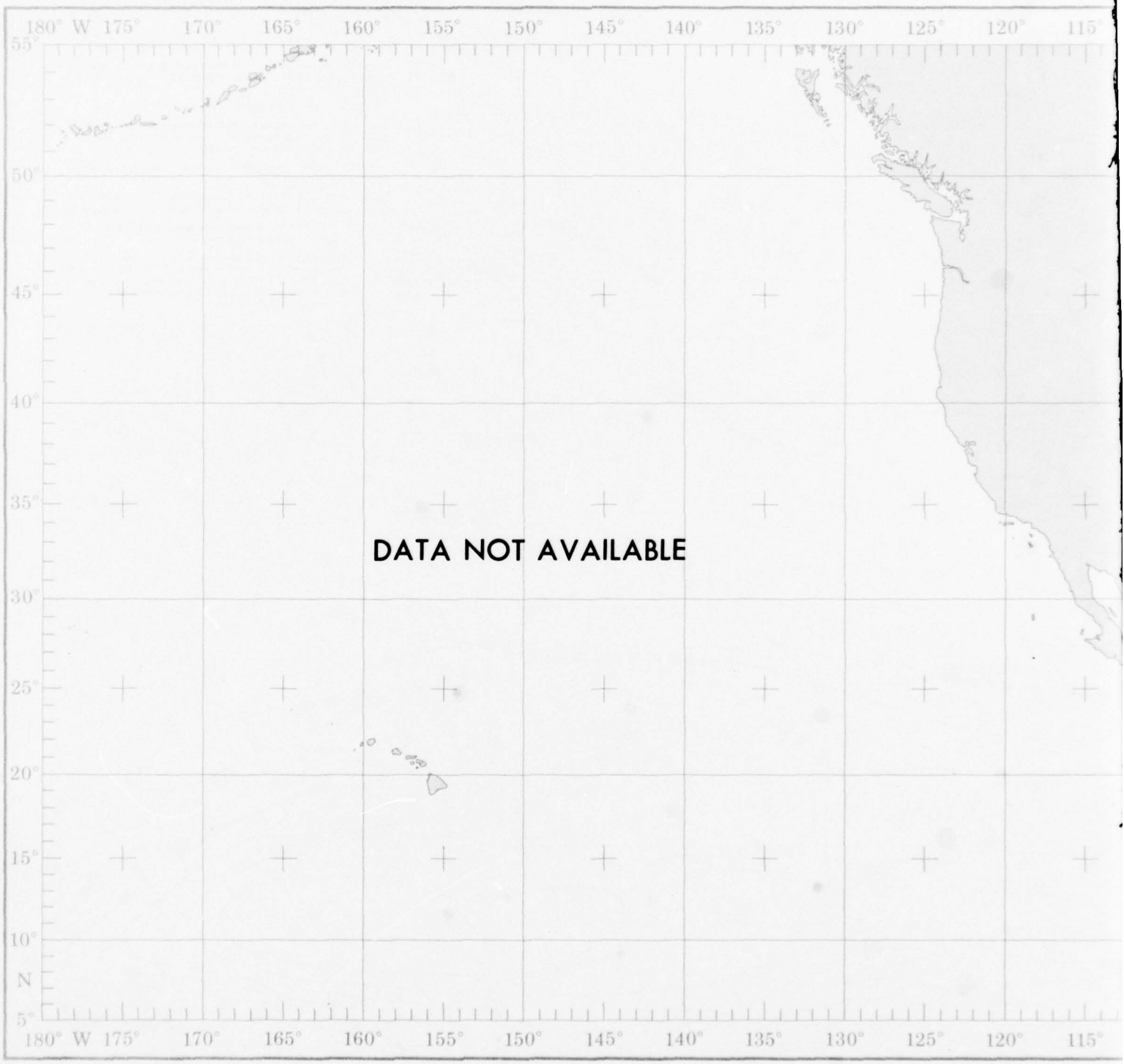
FEBRUARY


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

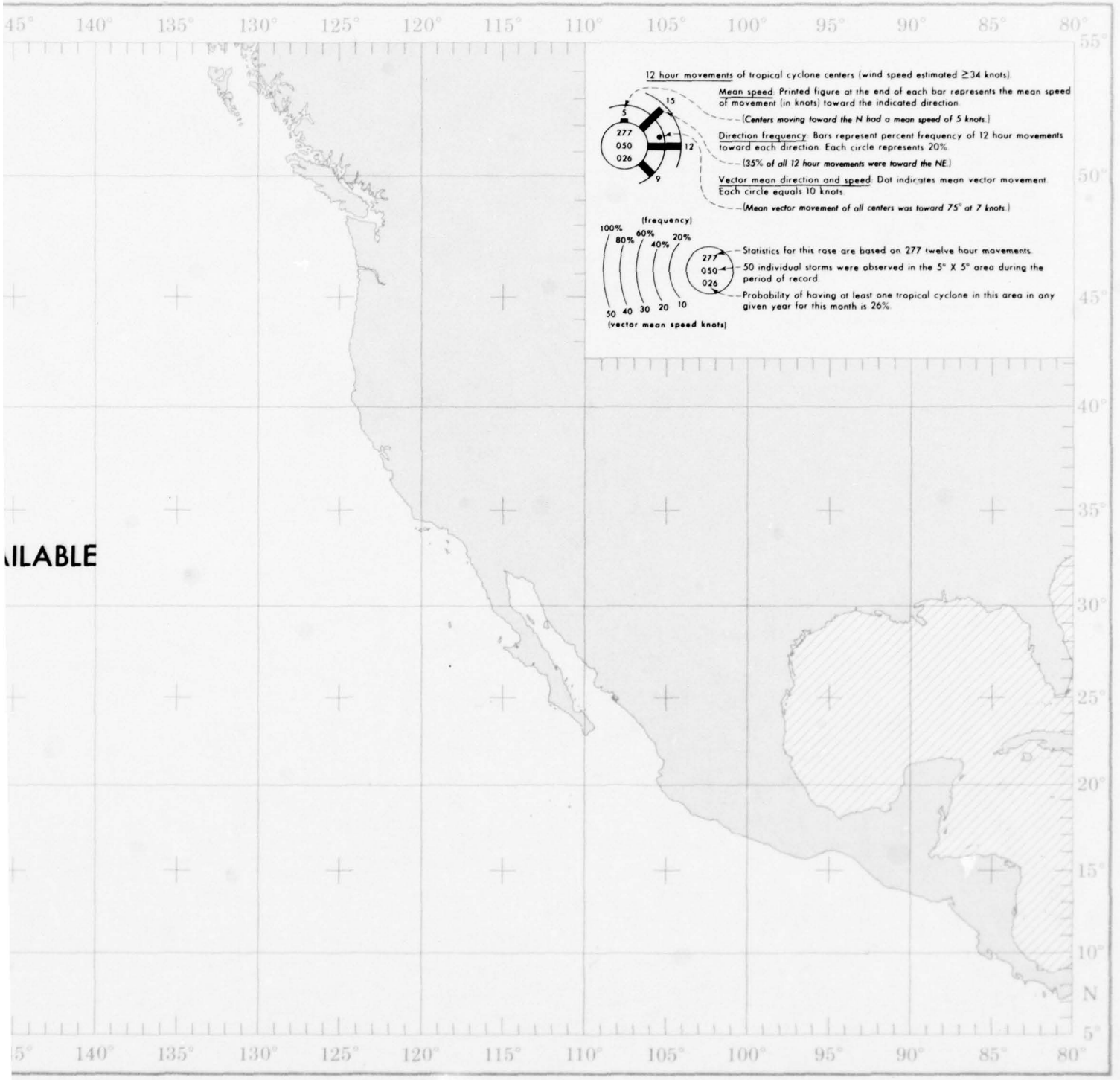
TROPICAL CYCLONE



TROPICAL CYCLONE

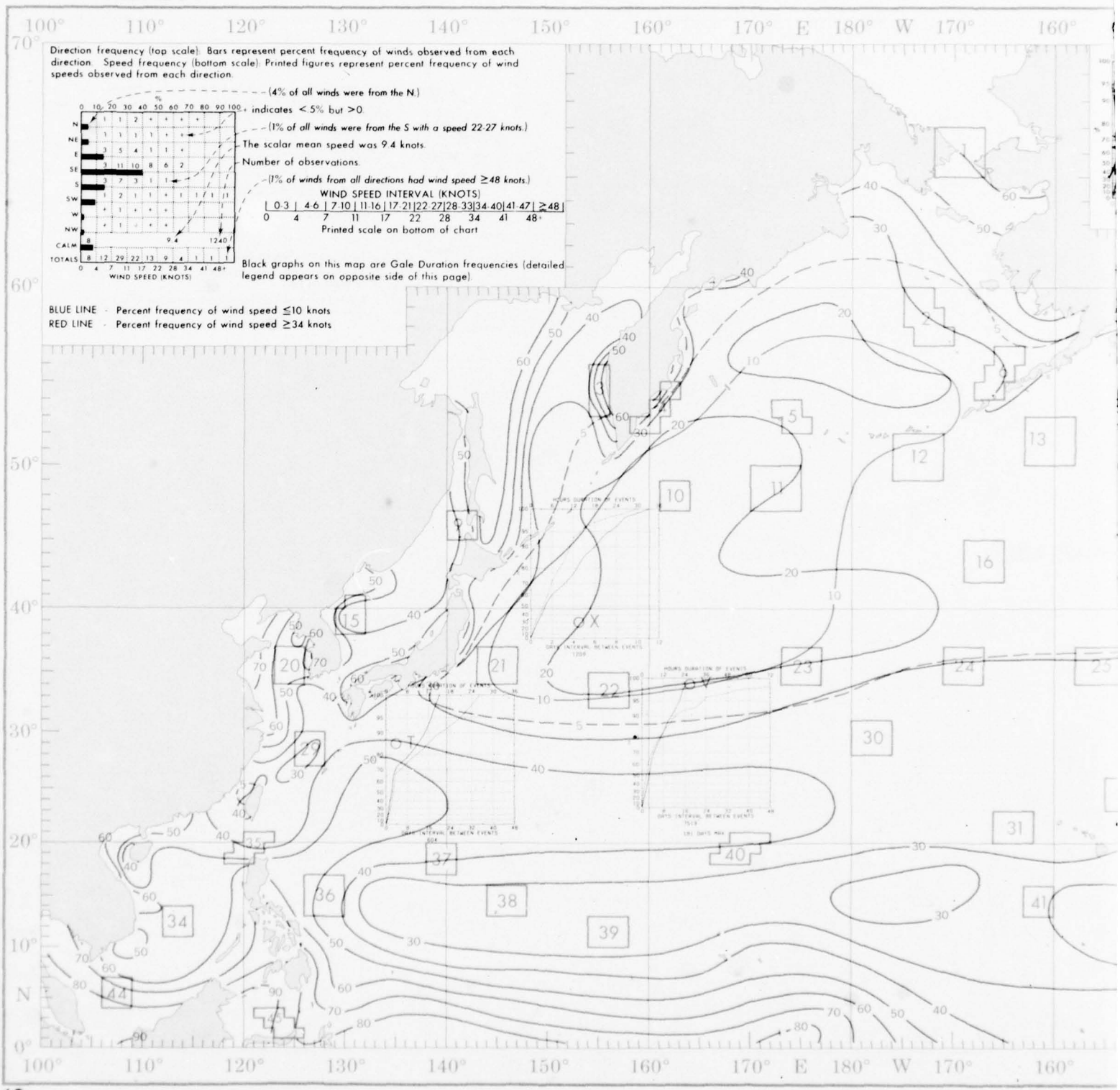


FEBRUARY

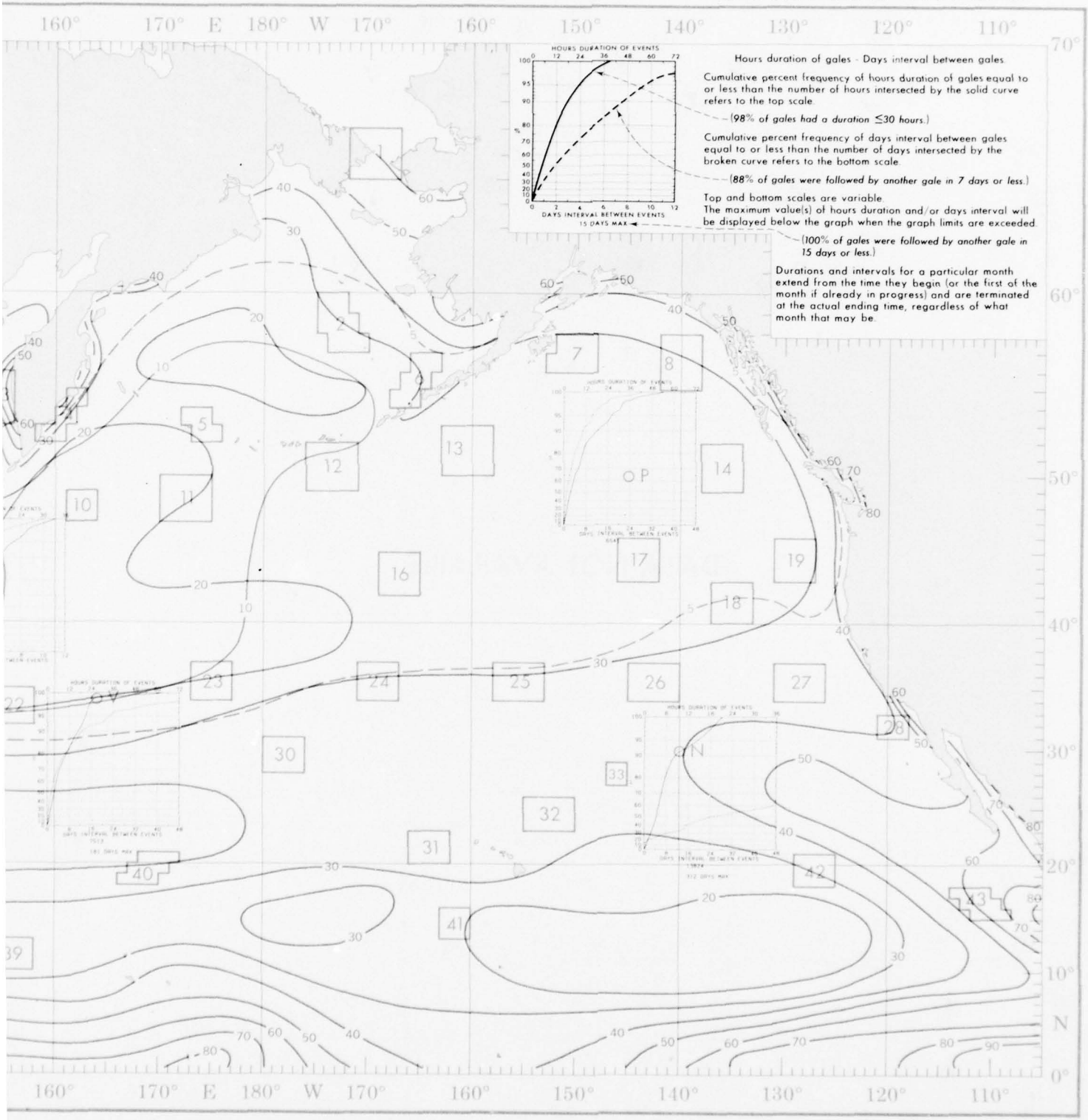


ILABLE

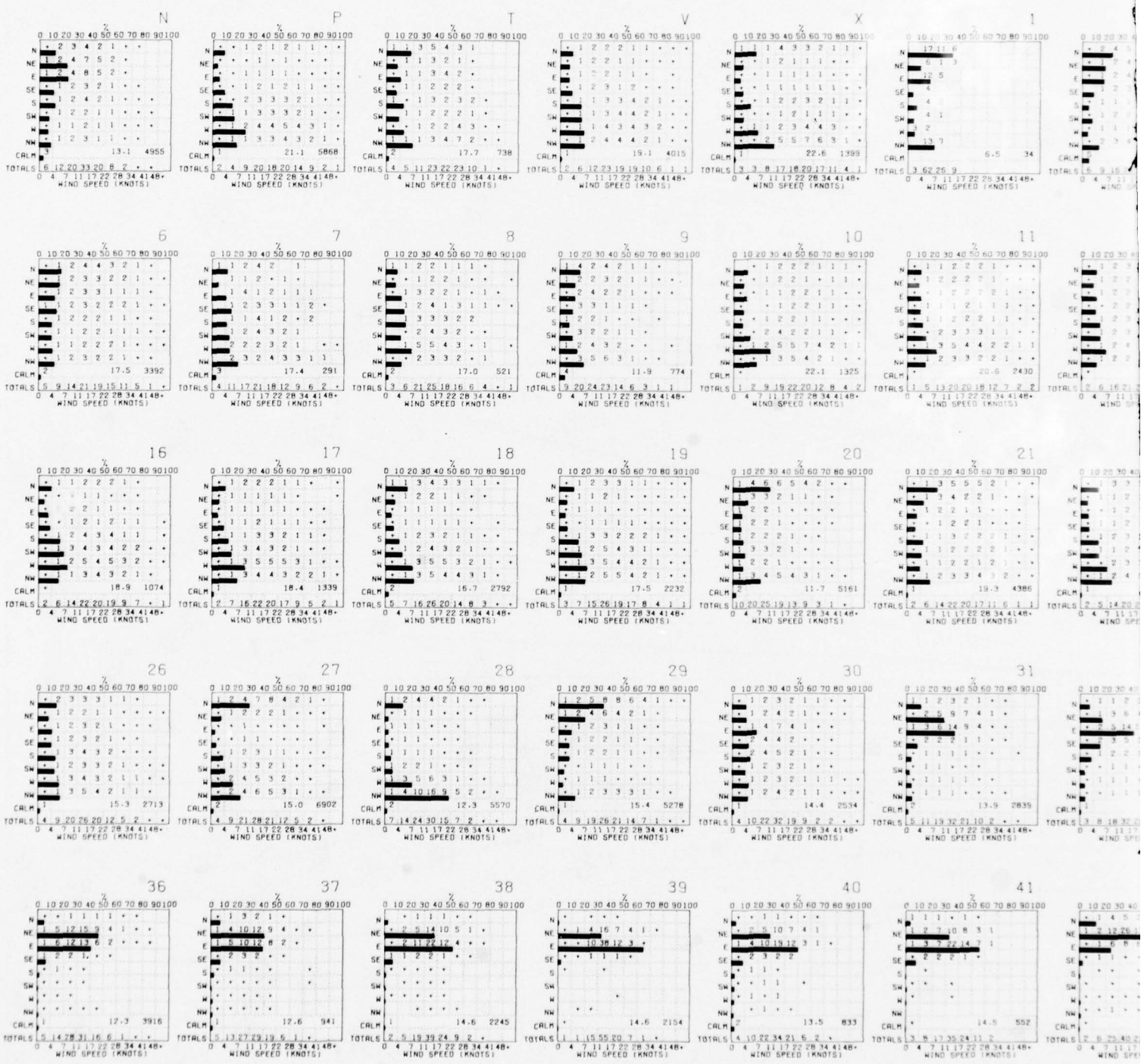
MARCH


Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
+ indicates < 5% but >0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
WIND SPEED (KNOTS)
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

SURFACE WINDS



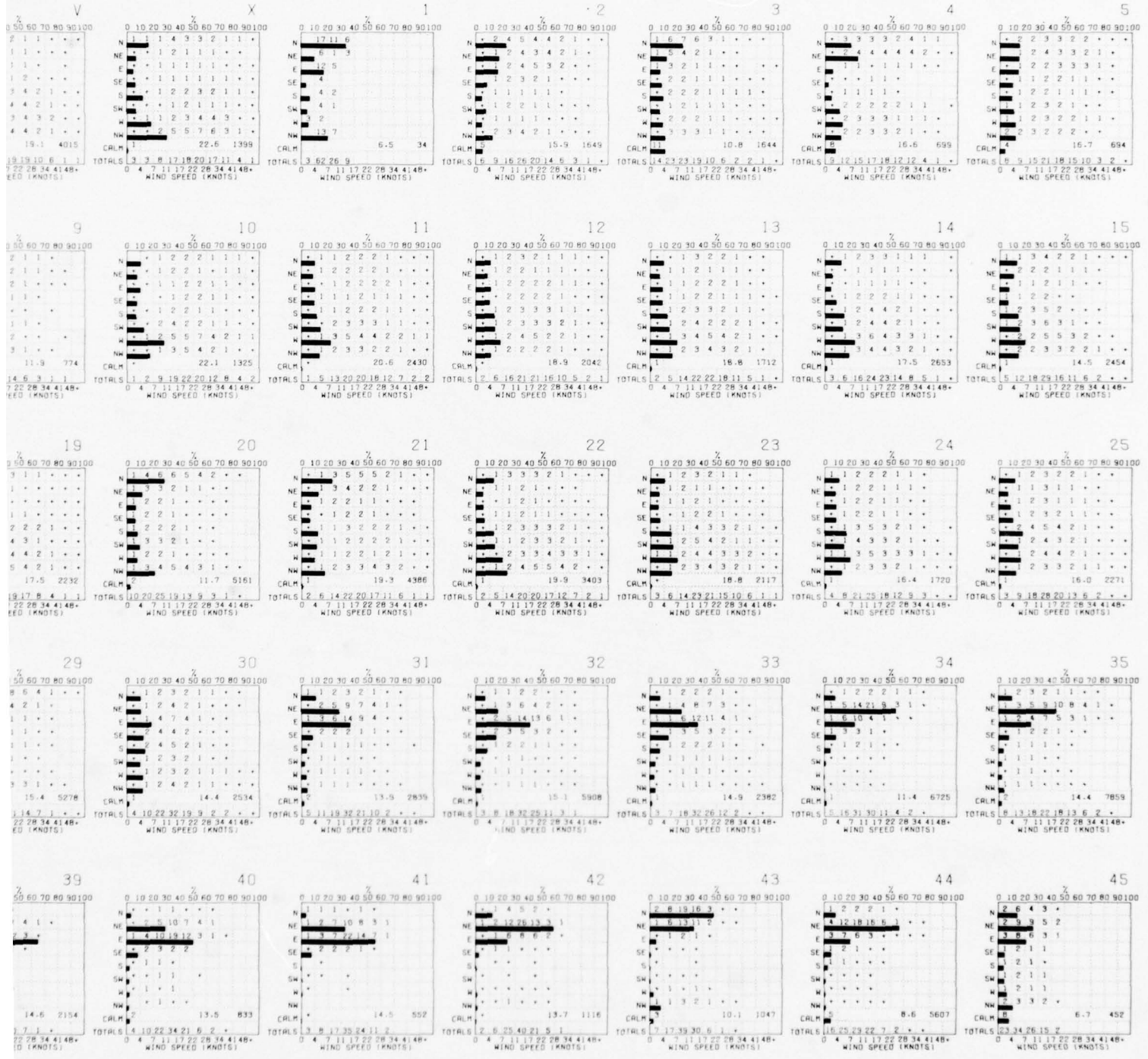
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

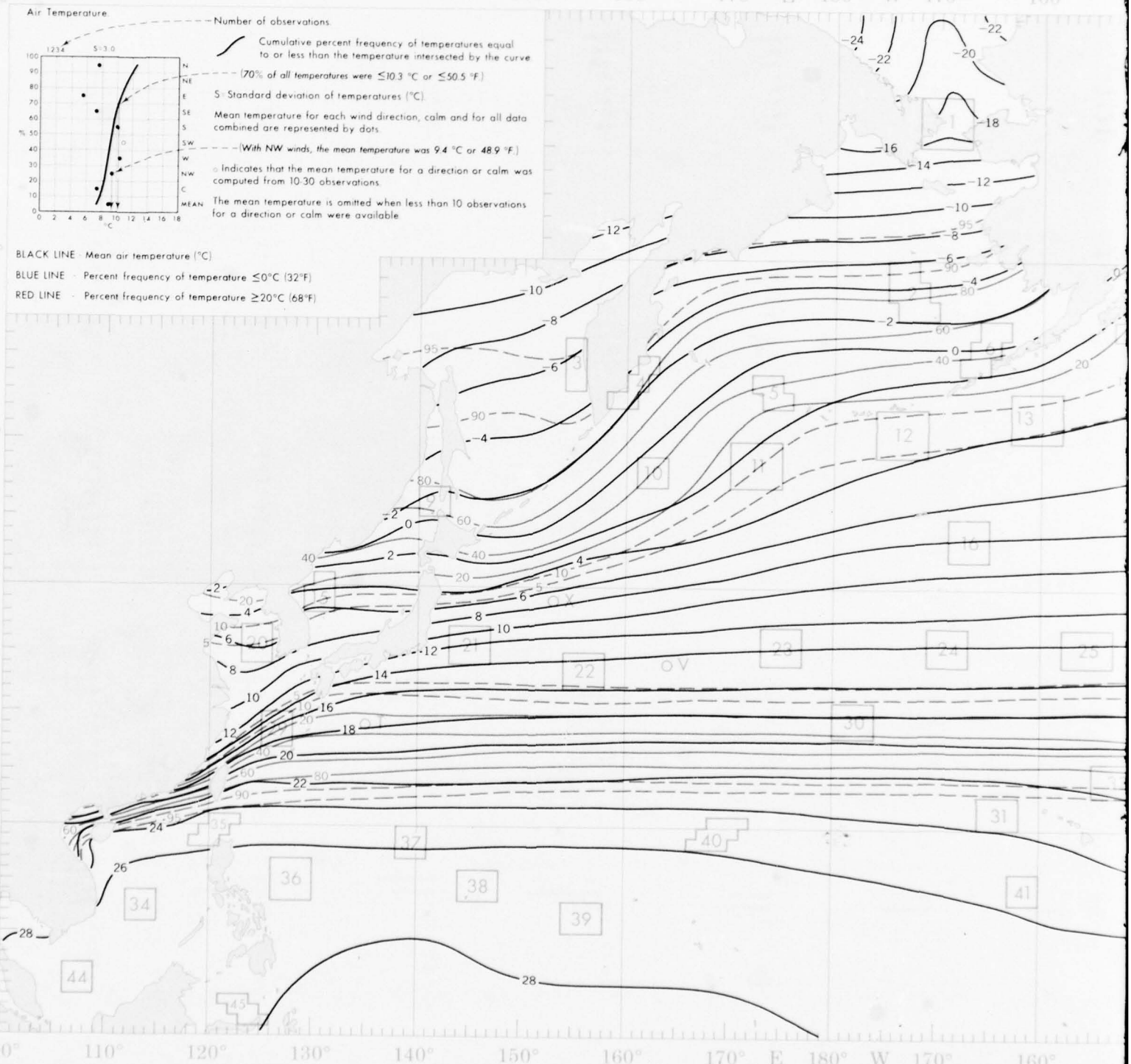
D

MARCH

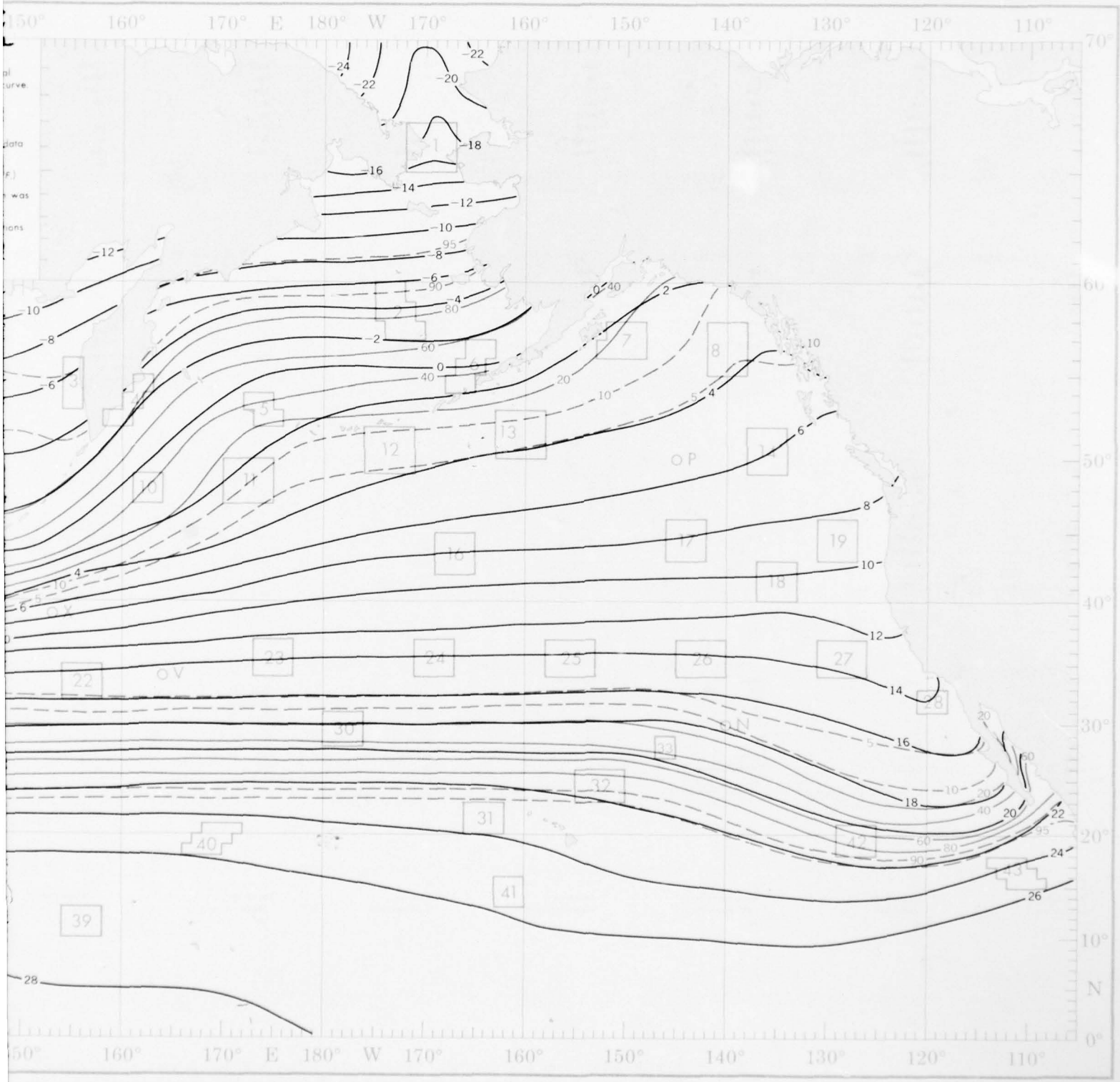


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

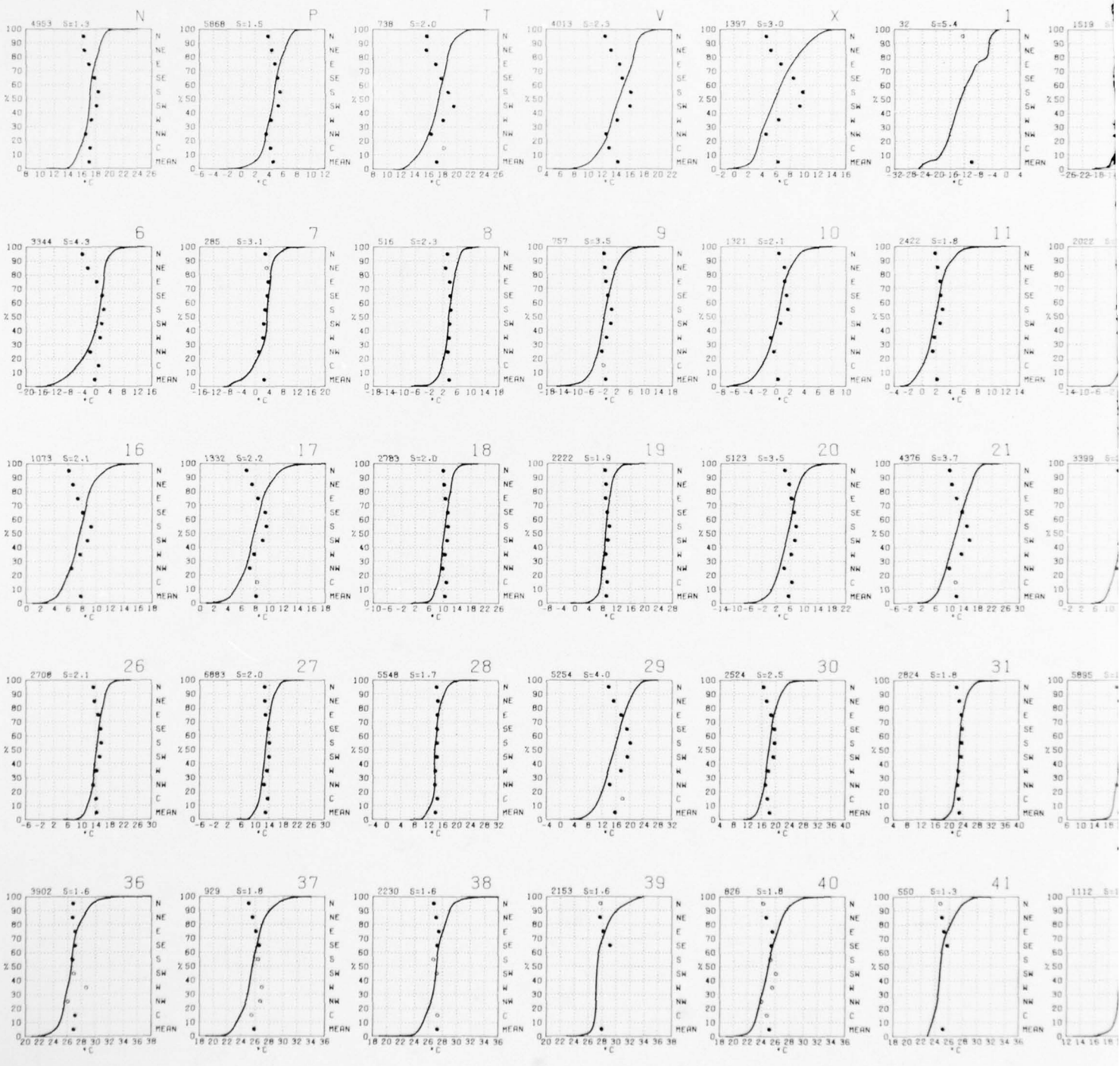
MARCH


Air Temperature
Number of observations
1234
S=3.0
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
°C
BLACK LINE - Mean air temperature (°C).
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)

SURFACE AIR TEMPERATURE

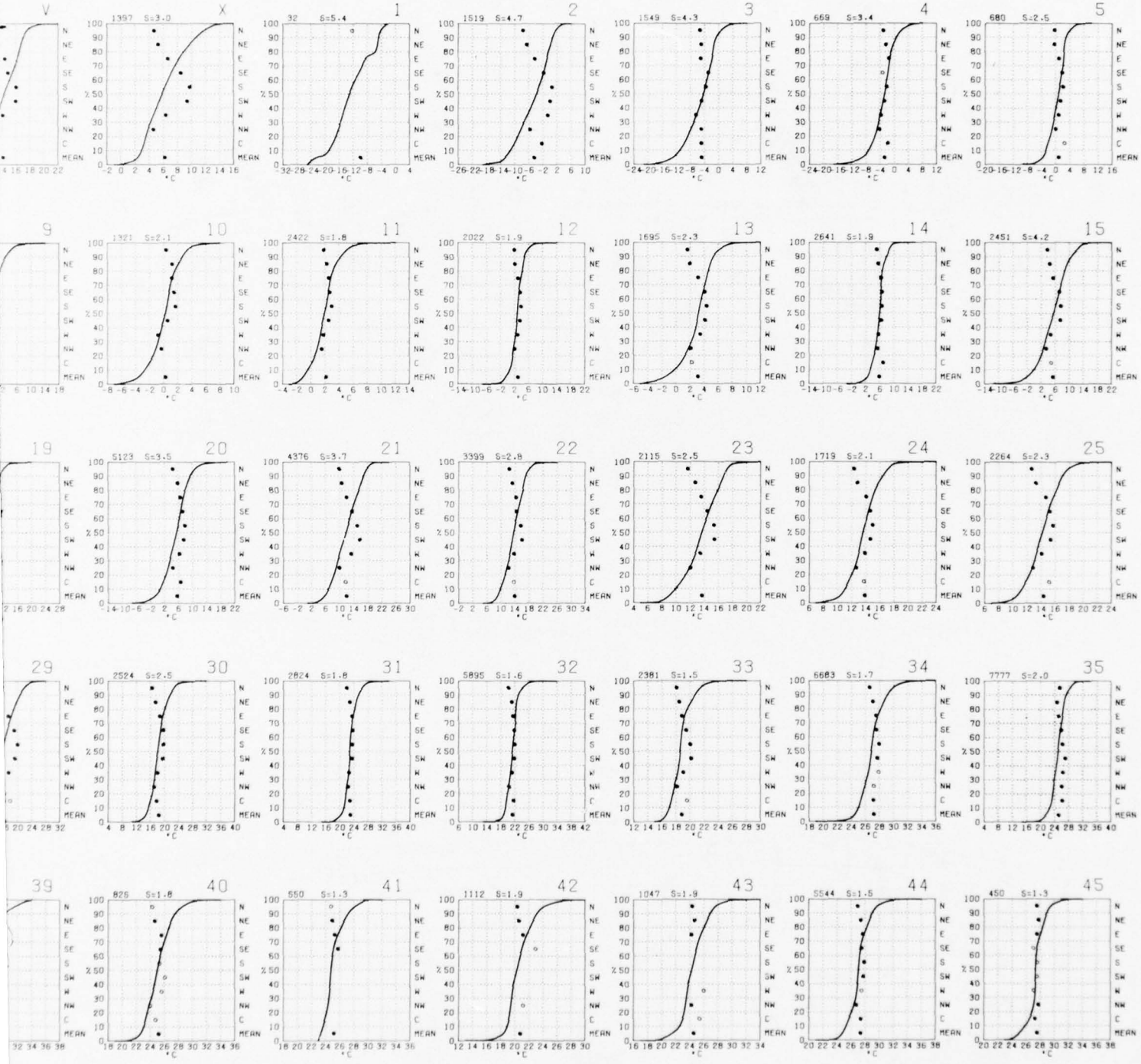


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted v

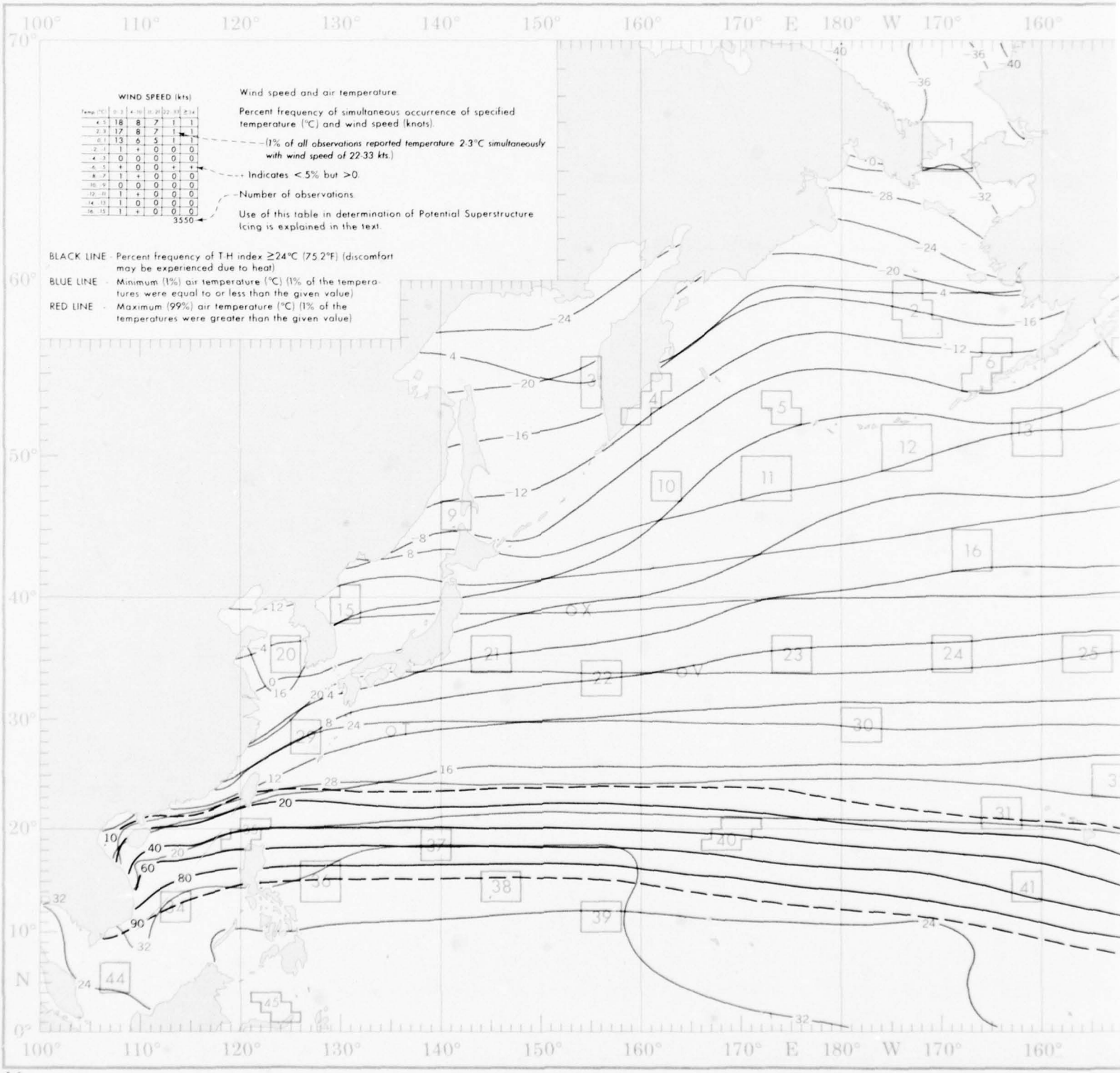
MARCH



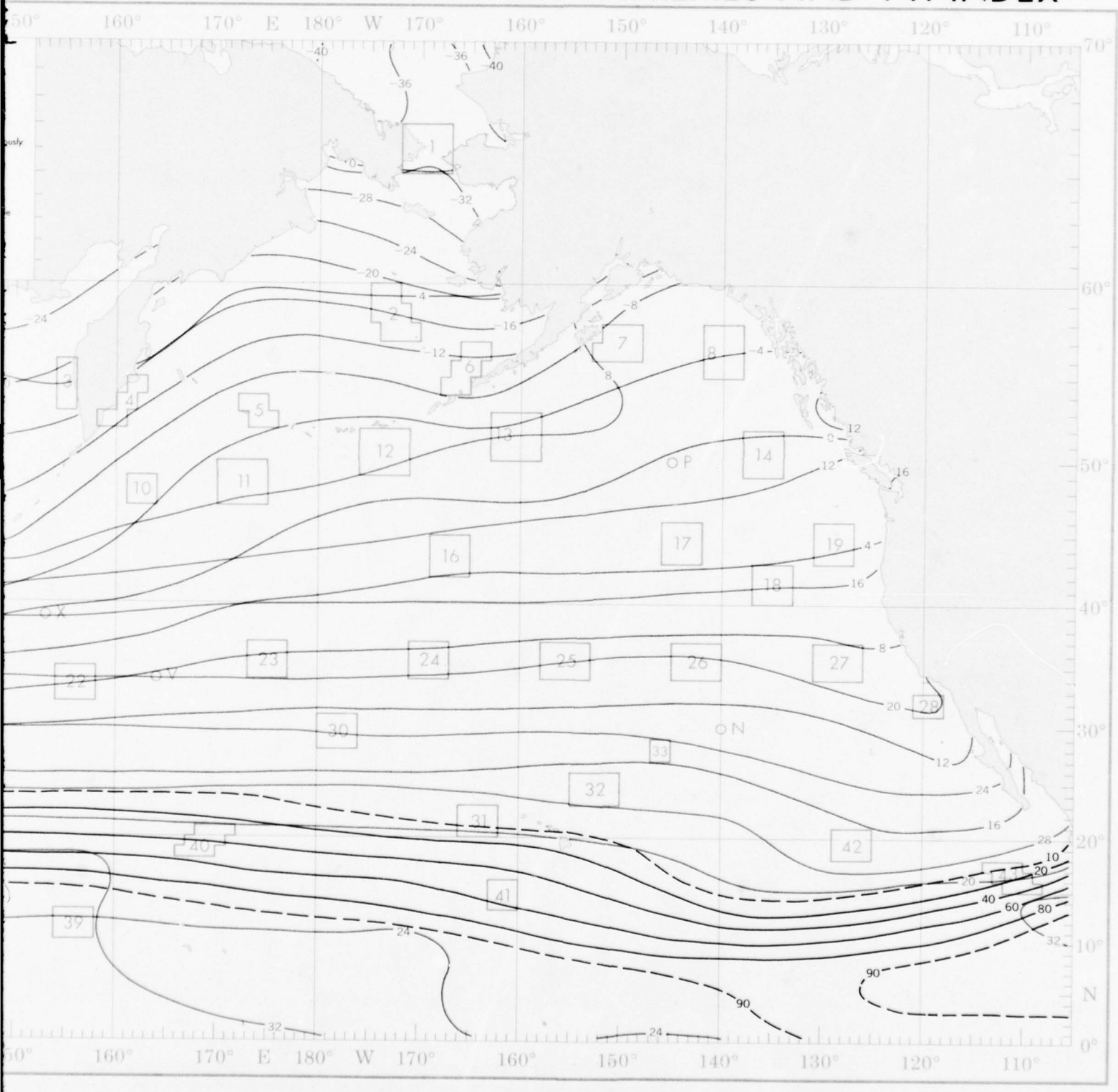
objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	+	1	2	+	+
18.19	2	11	17	3	+
16.17	3	18	30	5	+
14.15	+	2	4	1	+
12.13	0	+	+	0	0
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

4953

P

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	+	+	+	1	+
6.7	1	4	12	12	3
4.5	1	7	18	15	4
2.3	1	3	7	6	3
0.1	0	+	1	1	1
-2.-1	0	+	0	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

5868

T

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	0	0
20.21	1	+	4	5	+
18.19	2	9	15	11	1
16.17	2	6	17	10	+
14.15	+	1	5	6	+
12.13	0	1	4	1	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

738

V

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	+	0
18.19	+	1	2	3	1
16.17	1	4	14	9	2
14.15	1	6	11	8	2
12.13	1	5	10	7	2
10.11	+	2	3	2	1
8.9	+	+	1	1	1
6.7	0	0	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

4013

X

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	+	0
14.15	0	0	+	+	+
12.13	0	0	1	3	2
10.11	0	1	3	4	2
8.9	1	1	6	5	2
6.7	1	3	10	8	2
4.5	1	3	7	9	4
2.3	+	2	7	7	3
0.1	0	+	+	1	+
-2.-1	0	+	+	+	0
-4.-3	0	0	0	0	0

1397

1

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
-2.-1	0	3	0	0	0
-4.-3	0	6	0	0	0
-6.-5	0	19	3	0	0
-8.-7	0	6	0	0	0
-10.-9	3	19	0	0	0
-12.-11	0	13	0	0	0
-14.-13	0	9	0	0	0
-16.-15	0	6	3	0	0
-18.-17	0	3	3	0	0
-20.-19	0	3	0	0	0
-22.-21	0	0	0	0	0

32

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33
4.5	+	+	+	+
2.3	+	2	3	2
0.1	1	5	8	2
-2.-1	2	4	8	2
-4.-3	1	3	6	2
-6.-5	1	3	5	2
-8.-7	+	3	6	2
-10.-9	+	2	5	3
-12.-11	+	1	3	3
-14.-13	+	+	1	2
<-15	0	+	1	1

1

6

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	+	0	0	0
10.11	+	+	0	+	0
8.9	+	+	+	+	+
6.7	1	1	1	+	0
4.5	1	2	4	3	+
2.3	1	7	13	8	2
0.1	1	5	9	5	1
-2.-1	+	3	5	3	1
-4.-3	+	2	3	1	+
-6.-5	+	1	2	1	+
<-7	+	2	4	4	1

3344

7

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	0	0	0	0
10.11	0	+	+	0	0
8.9	+	1	+	+	0
6.7	0	3	4	+	+
4.5	1	10	13	6	3
2.3	2	9	13	6	3
0.1	+	1	3	4	1
-2.-1	0	1	1	2	0
-4.-3	0	2	2	1	+
-6.-5	0	+	1	1	+
<-7	0	0	+	1	+

285

8

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	1	0	0
8.9	0	1	1	1	0
6.7	1	6	8	3	1
4.5	1	9	14	8	2
2.3	1	8	14	7	1
0.1	1	2	4	2	1
-2.-1	0	+	1	+	+
-4.-3	0	0	0	+	0
-6.-5	0	0	+	0	0
-8.-7	0	+	0	0	0
-10.-9	0	0	0	0	0

516

9

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	+	0
10.11	0	0	+	0	0
8.9	0	1	0	0	0
6.7	0	1	1	+	0
4.5	1	4	2	1	1
2.3	1	7	4	1	+
0.1	2	9	8	2	1
-2.-1	2	10	10	3	+
-4.-3	2	10	8	2	+
-6.-5	1	3	2	1	+
<-7	+	2	1	+	+

757

10

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	0	0	+
6.7	0	+	+	0	+
4.5	0	+	2	1	1
2.3	+	4	11	7	3
0.1	1	4	15	12	5
-2.-1	+	2	9	8	3
-4.-3	+	1	3	3	1
-6.-5	0	0	+	1	+
-8.-7	0	0	+	+	+
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1321

11

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	+	0	0
8.9	0	+	+	+	0
6.7	+	1	1	1	+
4.5	+	3	7	6	1
2.3	+	7	17	13	5
0.1	+	5	11	7	4
-2.-1	+	1	2	2	+
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

2422

1

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33
10.11	0	+	+	0
8.9	0	+	+	+
6.7	+	2	4	2
4.5	+	7	13	7
2.3	1	9	18	11
0.1	+	3	5	3
-2.-1	0	1	1	1
-4.-3	0	+	+	+
-6.-5	0	0	0	0
-8.-7	0	0	0	0
-10.-9	0	0	0	0

2

16

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	+	1	+	0
12.13	+	1	2	1	+
10.11	+	3	6	4	2
8.9	+	7	16	11	2
6.7	1	7	12	9	2
4.5	+	2	5	3	1
2.3	0	+	1	+	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

1073

17

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	+	+	+	+	0
12.13	+	1	3	1	0
10.11	+	4	9	4	1
8.9	+	10	14	9	2
6.7	1	5	12	8	3
4.5	+	2	3	3	1
2.3	0	0	+	+	+
0.1	0	0	+	+	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1332

18

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	1	+	0
16.17	+	+	1	+	0
14.15	+	1	3	1	+
12.13	1	6	13	6	1
10.11	2	9	18	8	2
8.9	1	5	10	6	1
6.7	+	1	2	2	+
4.5	0	+	+	+	+
2.3	+	+	+	+	+
0.1	+	0	+	+	0
-2.-1	0	0	0	0	0

2789

19

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	0	+	0	0
16.17	0	+	+	+	+
14.15	+	+	+	+	+
12.13	+	2	3	2	+
10.11	1	7	13	7	1
8.9	2	9	20	11	2
6.7	+	3	7	4	1
4.5	+	+	1	+	+
2.3	0	+	+	+	+
0.1	0	0	+	+	0

2225

20

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	+	+	0	0
16.17	+	+	+	+	0
14.15	+	+	+	0	0
12.13	+	2	1	+	0
10.11	1	4	2	+	0
8.9	2	9	5	1	+
6.7	3	14	8	2	+
4.5	2	9	6	3	+
2.3	1	4	5	3	+
0.1	+	2	2	2	+
<-1	+	1	2	2	+

5123

21

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	+	0
20.21	+	+	1	+	+
18.19	+	1	2	2	1
16.17	+	2	6	5	1
14.15	+	3	6	3	1
12.13	+	5	9	5	1
10.11	+	4	7	5	1
8.9	+	3	6	4	1
6.7	+	1	3	3	1
4.5	+	1	1	1	+
2.3	0	+	+	+	0

4376

2

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33
24.25	0	0	+	0
22.23	0	+	+	0
20.21	+	+	+	+
18.19	+	1	4	3
16.17	+	4	10	7
14.15	1	4	9	7
12.13	+	5	10	7
10.11	+	3	5	4
8.9	+	1	2	2
6.7	0	+	+	+
4.5	0	0	0	0

3

26

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	+	+	+	0
18.19	+	1	3	1	0
16.17	1	7	12	5	+
14.15	1	11	15	5	1
12.13	1	9	11	4	1
10.11	+	1	3	2	+
8.9	+	+	+	+	+
6.7	0	0	0	+	0
4.5	0	0	+	0	0
2.3	0	0	0	0	0

2709

27

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	0	+	+	0	0
20.21	+	+	+	+	+
18.19	+	1	1	+	+
16.17	1	4	5	1	+
14.15	1	8	12	4	+
12.13	2	13	20	7	1
10.11	1	4	8	3	+
8.9	+	+	1	1	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0

6890

28

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	+	+	0	0
20.21	+	+	+	+	0
18.19	1	2	1	+	+
16.17	2	7	6	1	0
14.15	3	16	18	3	+
12.13	2	12	18	5	+
10.11	+	1	1	1	+
8.9	0	+	+	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

5553

29

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	+	1	1	+	0
22.23	+	2	3	+	+
20.21	+	4	5	1	+
18.19	1	5	8	2	+
16.17	1	6	9	3	+
14.15	+	4	8	4	+
12.13	+	3	7	4	+
10.11	+	1	4	2	+
8.9	+	1	2	1	+
<7	+	+	1	1	+

5257

30

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	0	+	+	0	0
26.27	0	1	+	0	0
24.25	0	1	1	0	+
22.23	+	2	5	1	+
20.21	1	6	10	2	+
18.19	1	12	17	3	+
16.17	1	7	14	4	1
14.15	+	2	4	1	+
12.13	+	+	1	+	0
10.11	0	0	+	+	0

2524

31

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	+	+	0
28.29	+	+	1	+	0
26.27	+	3	4	+	0
24.25	1	8	13	2	+
22.23	2	14	26	7	+
20.21	1	4	7	2	+
18.19	+	+	1	+	0
16.17	+	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2829

3

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33
32.33	0	0	0	+
30.31	0	0	+	0
28.29	+	+	+	0
26.27	+	1	1	+
24.25	+	2	4	+
22.23	1	10	21	6
20.21	1	11	25	6
18.19	+	2	5	2
16.17	0	+	+	+
14.15	0	0	0	+
12.13	0	0	0	0

5

36

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	+	1	+	+	0
30.31	+	2	2	+	0
28.29	1	10	11	1	+
26.27	2	23	27	4	+
24.25	1	4	6	1	0
22.23	+	+	+	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3902

37

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	1	0	0
30.31	+	1	1	+	0
28.29	1	5	5	1	0
26.27	2	18	24	2	+
24.25	1	13	13	3	0
22.23	+	2	3	+	0
20.21	0	+	1	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

929

38

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	0	0	+	0	0
32.33	+	+	1	+	0
30.31	+	2	3	+	0
28.29	+	7	23	4	0
26.27	1	14	31	6	+
24.25	+	1	3	1	0
22.23	0	+	+	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2231

39

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	0	1	4	0	0
30.31	+	2	7	1	0
28.29	+	5	25	3	0
26.27	+	7	39	4	+
24.25	0	+	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2153

40

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	1	0	0
28.29	0	3	5	+	0
26.27	1	12	18	1	0
24.25	2	13	23	4	+
22.23	+	3	8	2	0
20.21	0	+	+	1	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

826

41

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	2	4	0	0
26.27	1	6	21	4	0
24.25	1	14	32	9	0
22.23	+	2	1	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

550

4

WIND SPEED (KTS) TEMP (°C)	0-3	4-10	11-21	22-33
28.29	0	+	+	0
26.27	0	1	1	+
24.25	+	2	2	+
22.23	1	9	13	1
20.21	1	12	28	3
18.19	+	6	15	2
16.17	0	1	1	0
14.15	0	+	0	0
12.13	0	+	0	0
10.11	0	0	0	0
8.9	0	0	0	0

1

Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

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MARCH

V

WIND SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	+	+	+	0	
+	1	2	3	1	
1	4	14	9	2	
1	6	11	8	2	
1	5	10	7	2	
+	2	3	2	1	
+	+	1	1	1	
0	0	+	+	+	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	4013

X

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
16.17	0	0	0	+	0	
14.15	0	0	0	+	+	
12.13	0	0	1	3	2	
10.11	0	1	3	4	2	
8.9	1	1	6	5	2	
6.7	1	3	10	8	2	
4.5	1	3	7	9	4	
2.3	+	2	7	7	3	
0.1	0	+	+	1	+	
-2.-1	0	0	+	+	0	
-4.-3	0	0	0	0	0	1397

1

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
-2.-1	0	3	0	0	0	
-4.-3	0	6	0	0	0	
-6.-5	0	19	3	0	0	
-8.-7	0	6	0	0	0	
-10.-9	3	19	0	0	0	
-12.-11	0	13	0	0	0	
-14.-13	0	9	0	0	0	
-16.-15	0	6	3	0	0	
-18.-17	0	3	3	0	0	
-20.-19	0	3	0	0	0	
-22.-21	0	0	0	0	0	32

2

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
4.5	+	+	+	+	0	
2.3	+	2	3	2	+	
0.1	1	5	8	2	+	
-2.-1	2	4	8	2	+	
-4.-3	1	3	6	2	+	
-6.-5	1	3	5	2	+	
-8.-7	+	3	6	2	1	
-10.-9	+	2	5	3	+	
-12.-11	+	1	3	3	1	
-14.-13	+	+	1	2	+	
≤-15	0	+	1	1	+	1519

3

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
6.7	+	+	0	0	0	
4.5	+	1	+	0	+	
2.3	1	1	1	+	0	
0.1	1	5	3	1	+	
-2.-1	2	9	6	2	1	
-4.-3	3	7	6	2	1	
-6.-5	3	6	5	1	+	
-8.-7	1	7	3	1	+	
-10.-9	1	4	3	1	0	
-12.-11	1	2	1	1	0	
≤-13	1	3	1	+	+	1549

4

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
6.7	+	0	+	+	0	
4.5	1	1	+	1	0	
2.3	1	1	1	+	+	
0.1	2	4	6	4	1	
-2.-1	2	8	10	6	1	
-4.-3	2	6	8	5	2	
-6.-5	1	4	5	4	1	
-8.-7	+	1	2	2	+	
-10.-9	0	+	+	1	+	
-12.-11	+	+	1	+	0	
≤-13	0	+	+	1	0	669

5

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
8.9	+	0	0	0	0	
6.7	1	1	1	0	0	
4.5	2	4	4	2	+	
2.3	4	7	13	8	2	
0.1	1	5	9	7	1	
-2.-1	1	5	9	6	1	
-4.-3	+	3	3	2	+	
-6.-5	0	+	1	+	+	
-8.-7	0	+	+	+	0	
-10.-9	0	0	0	0	0	
-12.-11	0	0	0	0	0	680

9

WIND SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	0	0	+	0	
0	0	+	0	0	
0	1	0	0	0	
0	1	1	+	0	
+	1	2	1	0	
1	7	4	1	+	
2	9	8	2	1	
2	10	10	3	+	
2	10	8	2	+	
1	3	2	1	+	
+	2	1	+	+	757

10

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
8.9	0	+	+	0	0	
6.7	0	+	+	0	+	
4.5	0	+	2	1	1	
2.3	+	4	11	7	3	
0.1	1	4	15	12	5	
-2.-1	+	2	9	8	3	
-4.-3	+	1	3	3	1	
-6.-5	0	0	+	1	+	
-8.-7	0	0	0	+	+	
-10.-9	0	0	0	0	0	
-12.-11	0	0	0	0	0	1321

11

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
10.11	0	+	+	0	0	
8.9	+	+	+	+	0	
6.7	+	1	1	1	+	
4.5	+	3	7	6	1	
2.3	+	7	17	13	5	
0.1	+	5	11	7	4	
-2.-1	+	1	2	2	+	
-4.-3	0	+	+	+	+	
-6.-5	0	0	0	0	0	
-8.-7	0	0	0	0	0	
-10.-9	0	0	0	0	0	2422

12

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
10.11	0	+	+	0	0	
8.9	0	+	+	+	+	
6.7	+	2	4	2	+	
4.5	+	7	13	7	3	
2.3	1	9	18	11	4	
0.1	+	3	5	3	1	
-2.-1	0	1	1	1	1	
-4.-3	0	+	+	+	+	
-6.-5	0	0	0	0	0	
-8.-7	0	0	0	0	0	
-10.-9	0	0	0	0	0	2022

13

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
12.13	0	+	0	0	0	
10.11	0	+	+	+	0	
8.9	0	+	1	+	0	
6.7	+	2	6	4	+	
4.5	+	7	17	10	2	
2.3	1	6	15	10	2	
0.1	+	2	4	3	1	
-2.-1	+	1	2	1	+	
-4.-3	0	+	1	1	+	
-6.-5	0	0	+	+	+	
-8.-7	0	0	+	+	+	
-10.-9	0	0	0	0	0	1695

14

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
16.17	0	0	0	+	0	
14.15	0	0	+	0	0	
12.13	0	+	+	+	0	
10.11	+	1	1	+	+	
8.9	1	4	8	4	+	
6.7	1	10	24	10	2	
4.5	1	5	11	5	2	
2.3	+	2	3	2	1	
0.1	0	+	+	+	+	
-2.-1	0	+	+	+	0	
-4.-3	0	0	0	0	0	2641

15

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
20.21	0	+	0	+	0	
18.19	0	+	0	0	0	
16.17	0	+	+	+	0	
14.15	+	+	1	+	+	
12.13	+	1	4	1	0	
10.11	+	2	5	1	+	
8.9	1	4	9	2	+	
6.7	1	7	9	4	+	
4.5	1	6	7	3	+	
2.3	1	6	5	2	1	
≤1	1	4	6	4	1	2451

19

WIND SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	0	+	+	0	
0	+	+	+	0	
+	+	+	+	+	
+	2	3	2	+	
1	7	13	7	1	
2	9	20	11	2	
+	3	7	4	1	
+	+	1	+	+	
0	+	+	+	+	
0	0	+	+	0	2225

20

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
18.19	+	+	+	0	0	
16.17	+	+	+	+	0	
14.15	+	+	+	0	0	
12.13	+	2	1	+	0	
10.11	1	4	2	+	0	
8.9	2	9	5	1	+	
6.7	3	14	8	2	+	
4.5	2	8	6	3	+	
2.3	1	4	5	3	+	
0.1	+	2	2	2	+	
≤-1	+	1	2	2	+	5123

21

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
22.23	+	+	+	0	0	
20.21	+	+	+	+	+	
18.19	+	1	2	2	1	
16.17	+	2	6	5	1	
14.15	+	3	6	3	1	
12.13	+	5	9	5	1	
10.11	+	4	7	5	1	
8.9	+	3	6	4	1	
6.7	+	1	3	3	1	
4.5	+	1	1	1	+	
2.3	0	+	+	+	0	4376

22

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	+	+	0	0	
22.23	0	+	+	0	0	
20.21	+	+	+	+	0	
18.19	+	1	4	3	+	
16.17	+	4	10	7	2	
14.15	1	4	9	7	2	
12.13	+	5	10	7	2	
10.11	+	3	5	4	2	
8.9	+	1	2	2	1	
6.7	0	+	+	+	+	
4.5	0	0	0	0	0	3399

23

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
20.21	0	+	+	0	0	
18.19	+	1	2	1	+	
16.17	1	3	12	7	1	
14.15	1	6	12	6	2	
12.13	1	7	11	5	2	
10.11	1	3	5	4	1	
8.9	0	+	2	2	1	
6.7	0	0	+	+	+	
4.5	0	0	0	0	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	2115

24

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
22.23	0	+	0	0	0	
20.21	0	+	+	+	0	
18.19	+	2	2	+	0	
16.17	1	6	8	3	1	
14.15	1	9	16	6	1	
12.13	2	9	14	7	2	
10.11	+	2	3	3	1	
8.9	0	+	+	1	+	
6.7	0	0	0	+	0	
4.5	0	0	0	0	0	
2.3	0	0	0	0	0	1720

25

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	+	0	0	0	
22.23	+	0	+	0	0	
20.21	0	+	1	+	0	
18.19	+	2	2	+	0	
16.17	1	6	8	3	1	
14.15	1	9	16	6	1	
12.13	1	8	13	4	+	
10.11	+	2	3	1	+	
8.9	1	8	14	6	1	
6.7	1	6	12	6	1	
4.5	1	6	7	3	+	
2.3	1	8	14	6	1	
≤1	1	6	12	6	1	
	0	1	4	3	1	2267

29

WIND SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
+	+	+	0	0	
+	1	1	+	0	
+	2	3	+	+	
1	4	5	1	+	
1	5	8	2	+	
1	6	9	3	+	
+	4	8	4	+	
+	3	7	4	+	
+	1	4	2	+	
+	1	2	1	+	
+	+	1	1	+	5257

30

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
30.31	0	+	0	0	0	
28.29	0	+	+	0	0	
26.27	0	1	+	0	0	
24.25	0	1	1	0	+	
22.23	+	2	5	1	+	
20.21	1	6	10	2	+	
18.19	1	12	17	3	+	
16.17	1	7	14	4	1	
14.15	+	2	4	1	+	
12.13	+	+	1	+	+	
10.11	0	0	+	+	0	2524

31

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
32.33	+	+	+	0	0	
30.31	+	+	+	+	0	
28.29	+	+	1	+	0	
26.27	+	3	4	+	0	
24.25	1	8	13	2	+	
22.23	2	14	26	7	+	
20.21	1	4	7	2	+	
18.19	+	+	1	+	0	
16.17	+	+	+	+	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	2829

32

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
32.33	0	0	0	+	0	
30.31	0	0	+	0	0	
28.29	+	+	+	0	0	
26.27	+	1	1	+	0	
24.25	+	2	4	+	+	
22.23	1	10	21	6	+	
20.21	1	11	25	6	+	
18.19	+	2	5	2	+	
16.17	0	+	+	+	+	
14.15	0	0	0	+	0	
12.13	0	0	0	0	0	5898

33

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
26.27	0	+	+	0	0	
24.25	+	+	+	0	0	
22.23	+	1	2	1	0	
20.21	1	6	13	3	+	
18.19	1	14	33	8	+	
16.17	+	3	9	2	+	
14.15	0	+	+	+	0	
12.13	0	0	0	0	0	
10.11	0	0	0	0	0	
8.9	0	0	0	0	0	
6.7	0	0	0	0	0	2381

34

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
34.35	+	+	+	0	0	
32.33	+	1	1	+	0	
30.31	+	4	3	+	0	
28.29	2	16	12	1	0	
26.27	2	23	20	3	+	
24.25	+	3	4	2	+	
22.23	0	+	+	+	0	
20.21	+	+	+	+	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	6685

35

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	+	0	0	0	
32.33	+	+	+	0	0	
30.31	+	1	1	+	0	
28.29	2	5	3	1	+	
26.27	3	14	14	3	+	
24.25	2	9	16	8	1	
22.23	+	1	6	6	1	
20.21	+	+	1	1	+	
18.19	+	+	+	+	+	
16.17	0	+	+	+	0	
14.15	0	0	0	0	0	7783

39

WIND SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
+	+	+	0	0	
0	1	4	0	0	
+	2	7	1	0	
+	5	25	3	0	
+	7	39	4	+	
0	+	1	+	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	2153

40

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
32.33	0	+	+	0	0	
30.31	+	+	1	0	0	
28.29	0	3	5	+	0	
26.27	1	12	18	1	0	
24.25	2	13	23	4	+	
22.23	+	3	8	2	0	
20.21	0	+	+	1	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	826

41

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
30.31	0	+	+	0	0	
28.29	0	+	+	0	0	
26.27	1	6	21	4	0	
24.25	1	14	32	9	0	
22.23	+	2	1	1	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
10.11	0	0	0	0	0	550

42

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
28.29	0	+	+	0	0	
26.27	0	+	1	+	0	
24.25	+	2	2	+	0	
22.23	1	9	13	1	0	
20.21	1	12	28	3	0	
18.19	+	6	15	2	0	
16.17	0	1	1	0	0	
14.15	0	+	0	0	0	
12.13	0	+	0	0	0	
10.11	0	0	0	0	0	
8.9	0	0	0	0	0	1113

43

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	+	0	0	0	
32.33	0	0	+	0	0	
30.31	+	+	+	0	0	
28.29	1	3	3	0	0	
26.27	1	14	7	+	0	
24.25	3	22	14	1	0	
22.23	1	15	10	+	0	
20.21	0	2	1	0	0	
18.19	0	+	0	0	0	
16.17	0	0	+	0	0	
14.15	0	0	0	0	0	1050

44

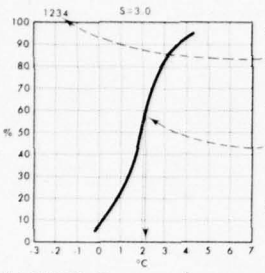
TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
36.37	0	+	0	+	0	
34.35	0	+	+	0	0	
32.33	+	1	+	0	0	
30.31	1	4	2	+	0	
28.29	6	21	9	+	0	
26.27	8	25	15	1	+	
24.25	1	2	2	+	+	
22.23	+	+	+	+	0	
20.21	0	+	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	5561

45

TEMP (°C)	WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	+	0	0	0	
32.33	+	1	0	0	0	
30.31	1	3	1	0	0	
28.29	11	27	9	0	0	
26.27	10	26	7	0	0	
24.25	1	3	+	0	0	
22.23	0	0	0	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	451

it the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH



Sea surface temperature.

Number of observations.

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

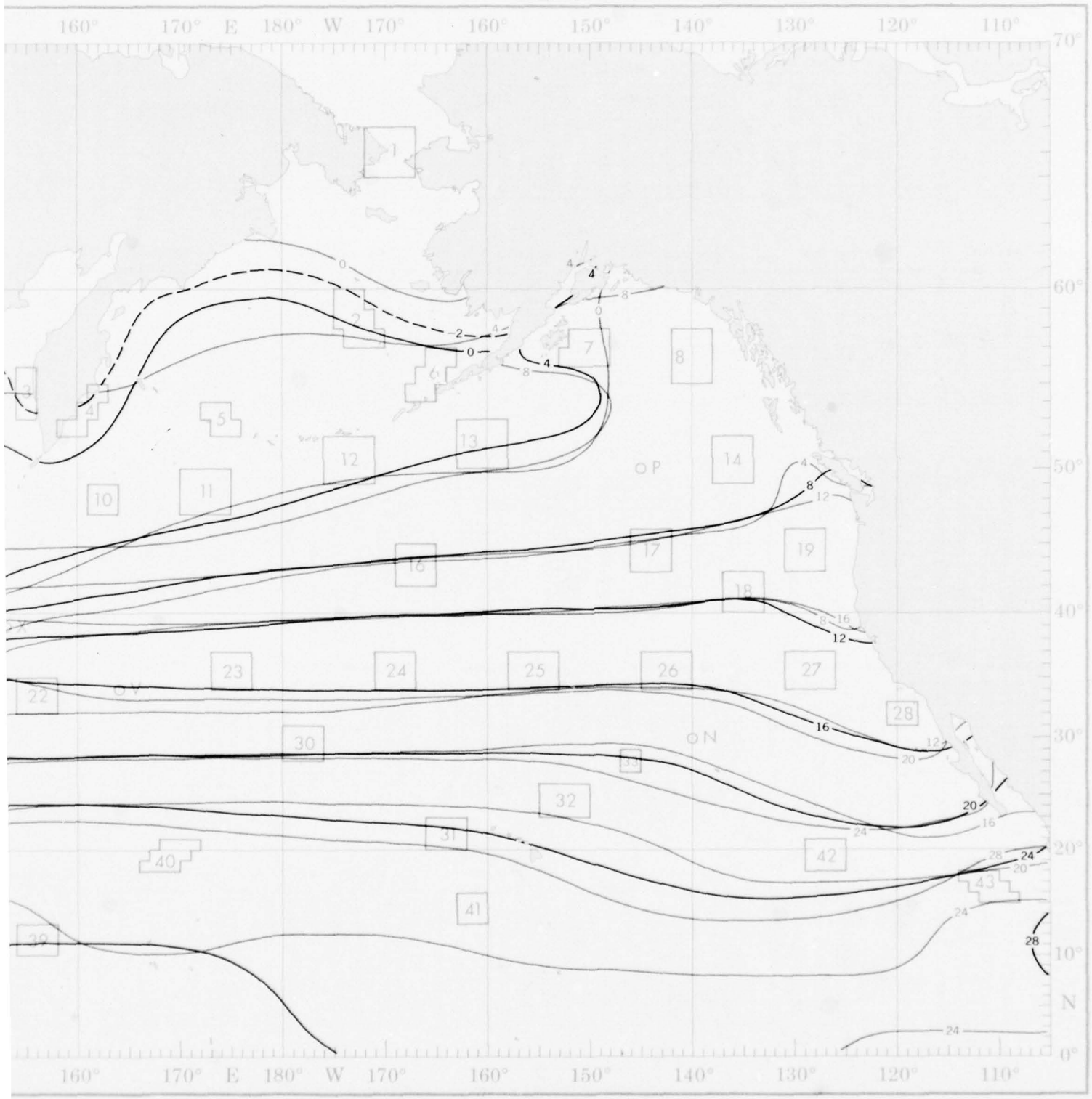
S - Standard deviation of sea surface temperatures (°C).

BLACK LINE - Mean sea surface temperature (°C)

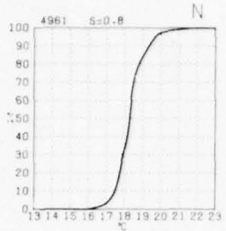
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

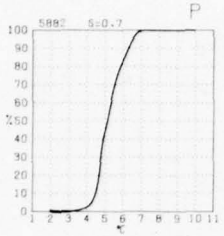
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

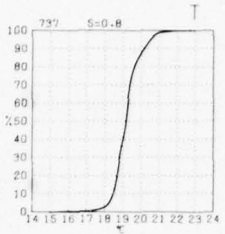
SEA SURFACE TEMPERATURE

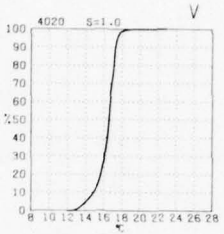


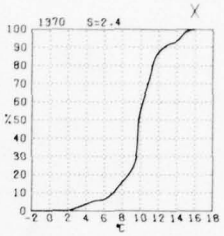
SEA SURFACE TEMPERATURE





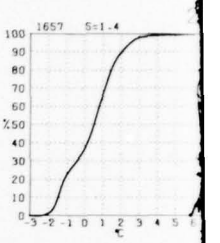


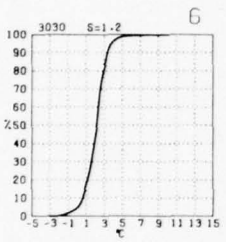


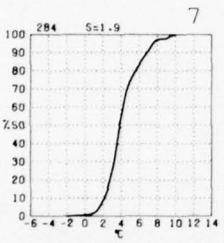


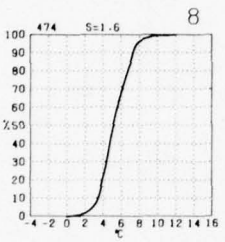
INSUFFICIENT DATA

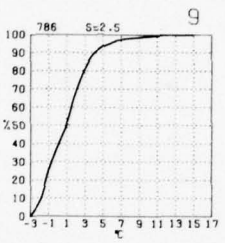
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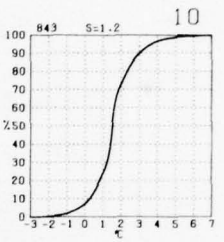


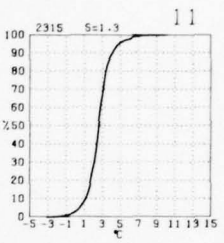


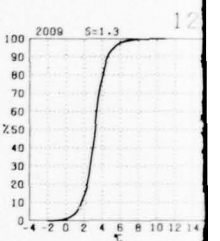


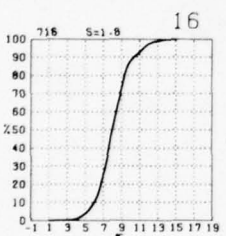


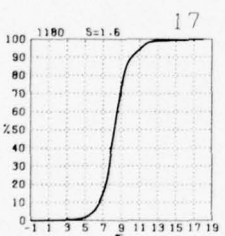


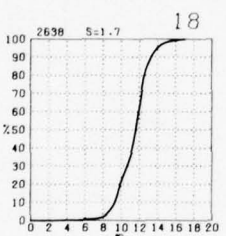


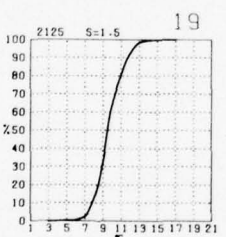


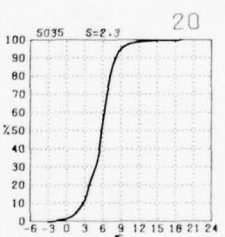


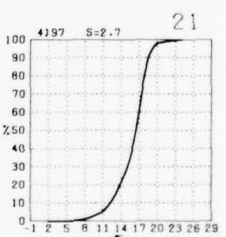


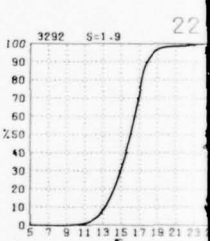


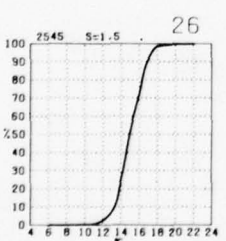


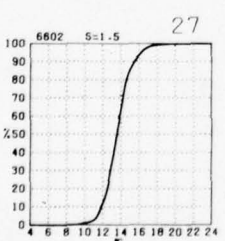


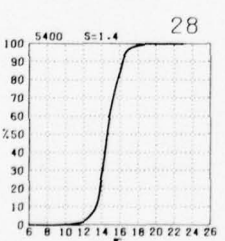


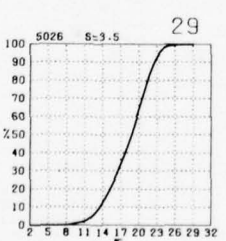


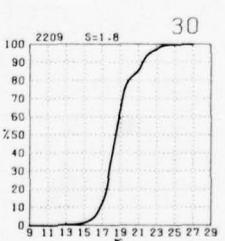


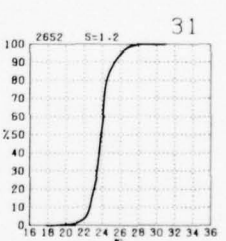


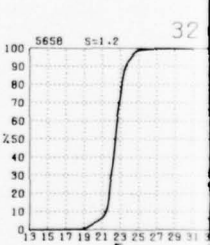


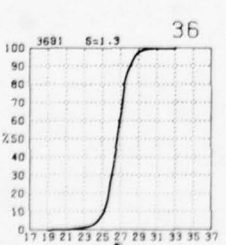


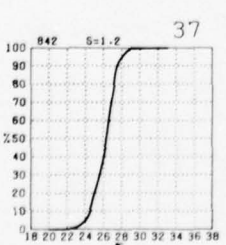


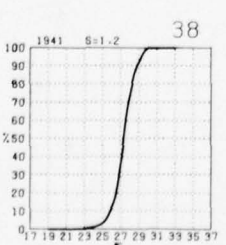


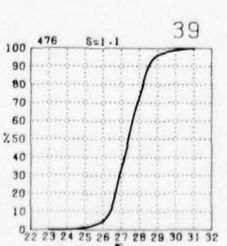


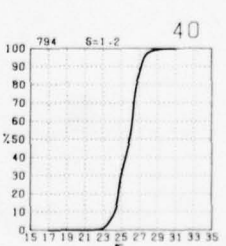


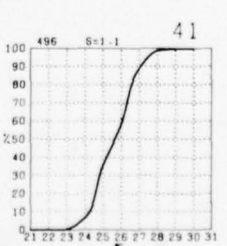


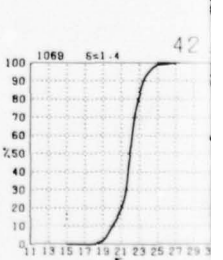








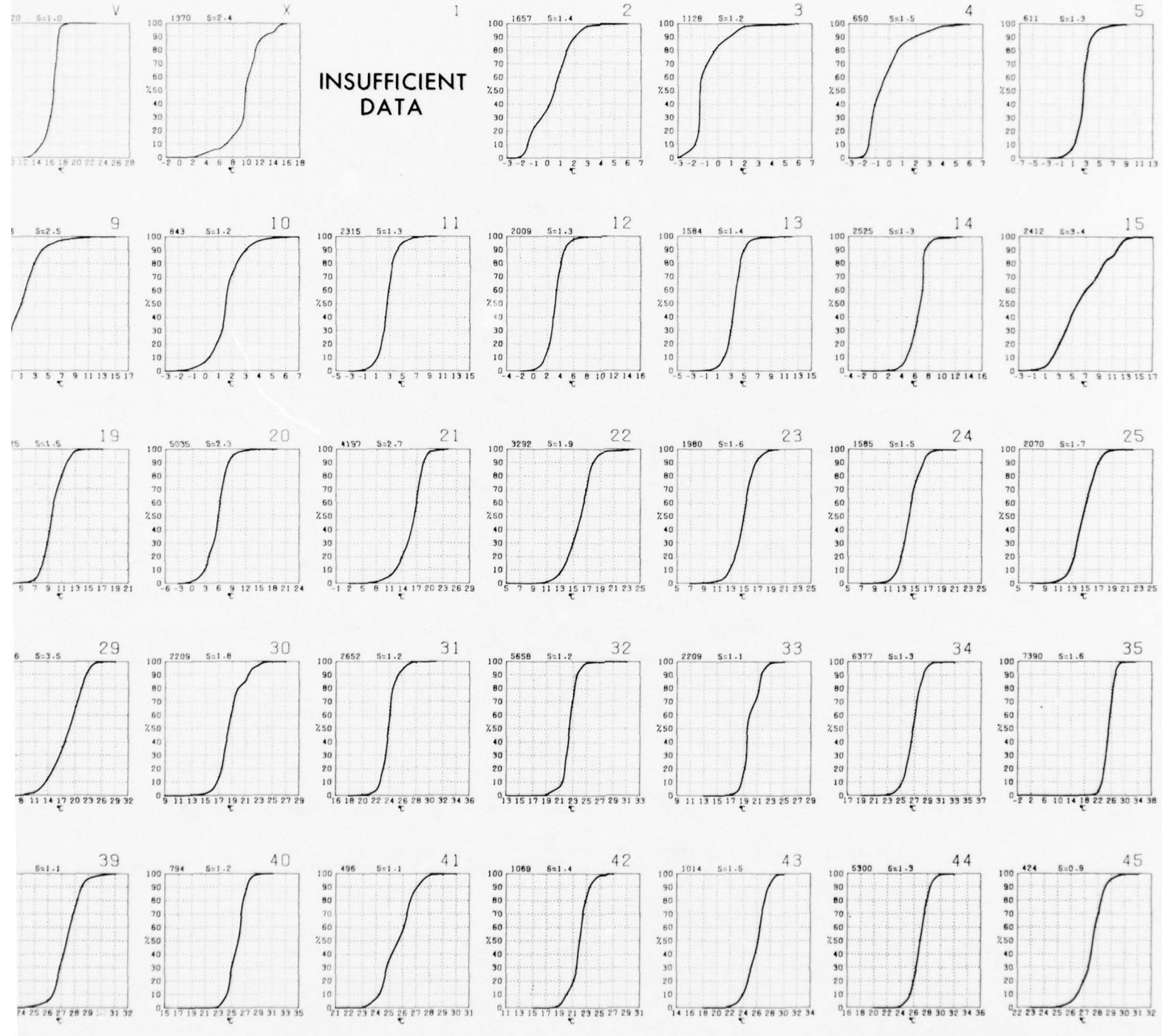




Graphs represent the objective compilation of available data for specified areas without regard to suspect
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias w

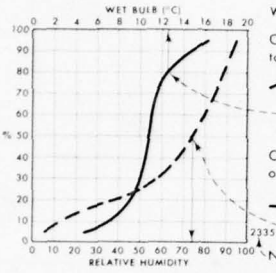
RE

MARCH



nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH



Wet bulb - Relative humidity.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

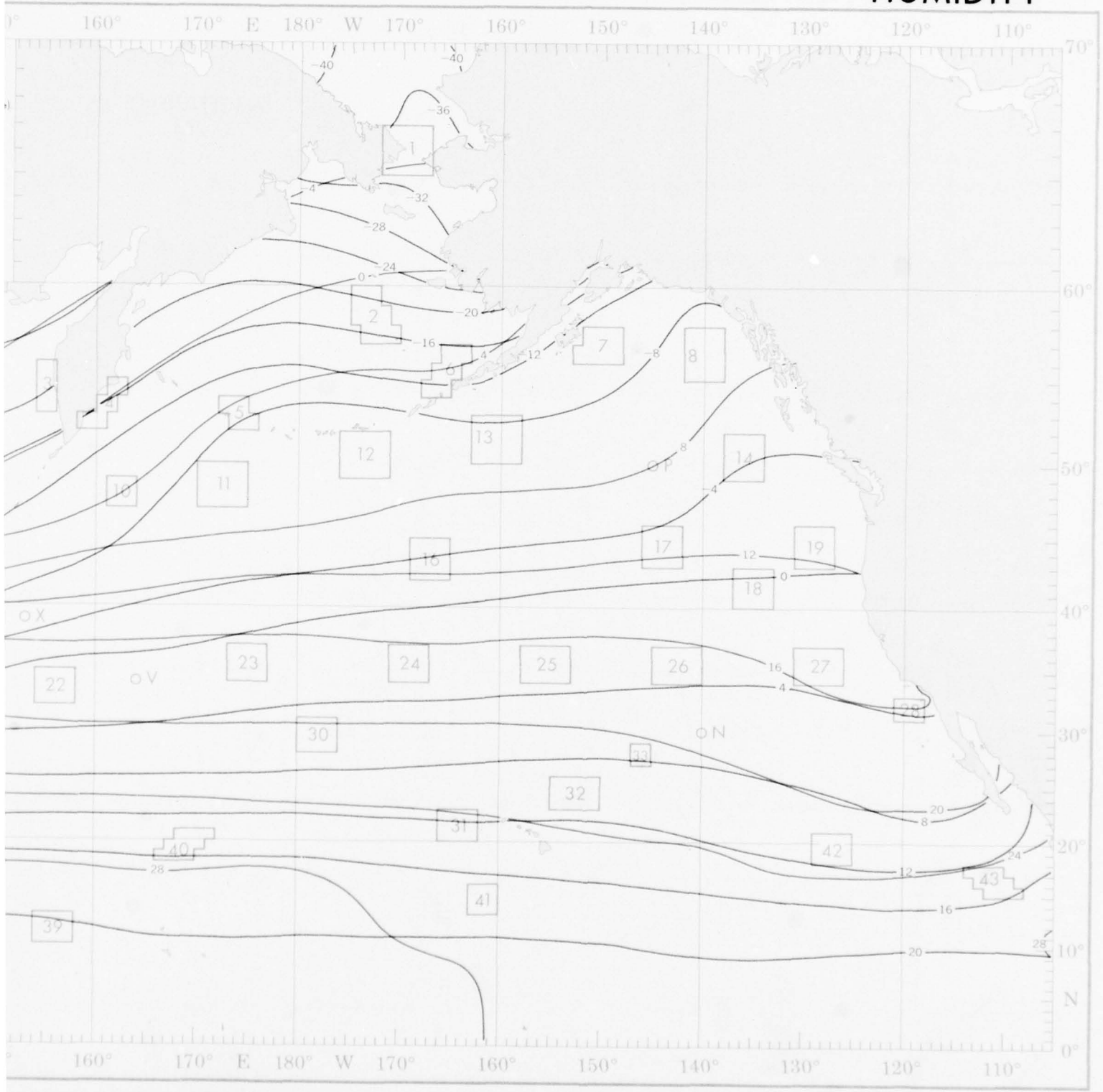
(50% of all observed relative humidities were ≤74%.)

Number of observations.

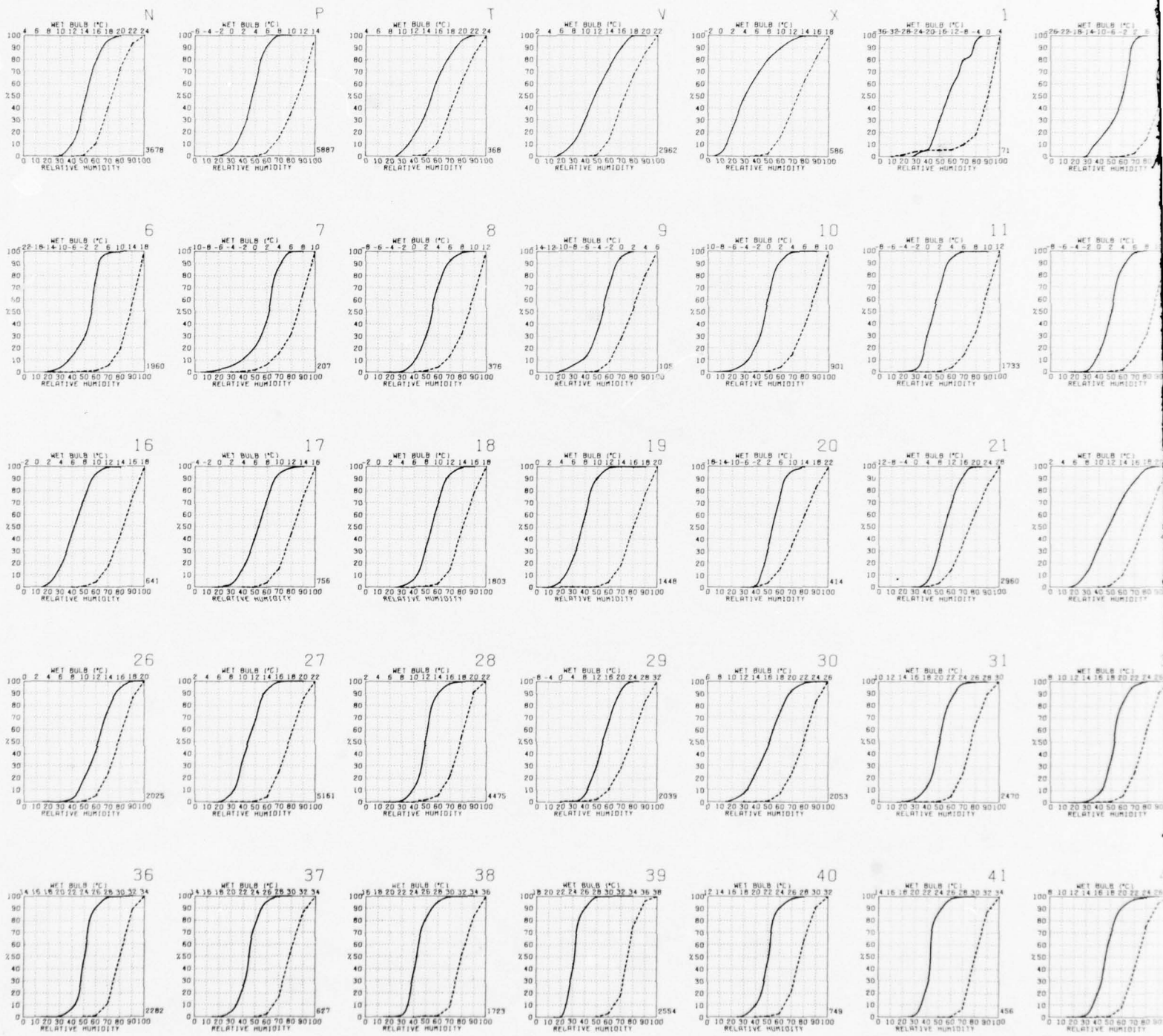
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

HUMIDITY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
-40
-40
-36
-32
-28
-24
-20
-16
-12
-8
-4
0
4
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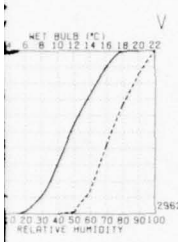
WET BULB AND RELATIVE HUMIDITY

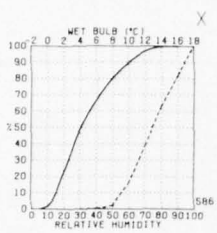


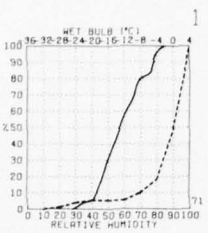
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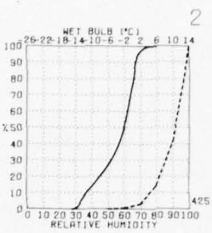
HUMIDITY

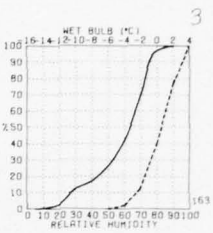
MARCH





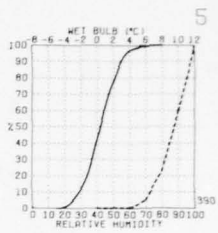


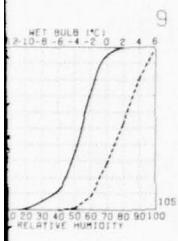


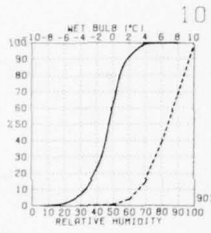


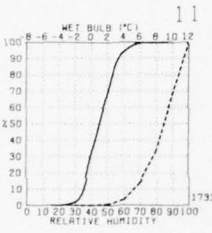
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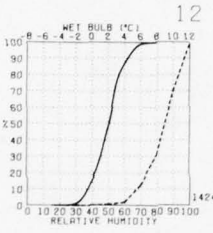
INSUFFICIENT DATA

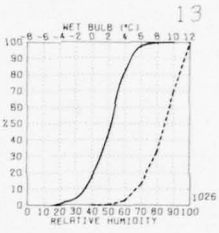


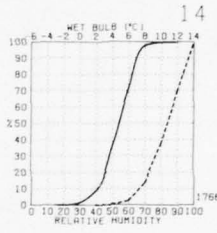


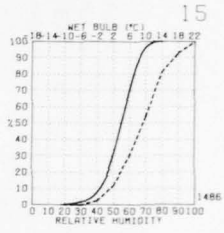


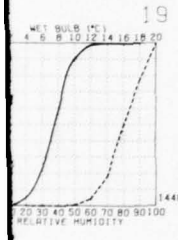


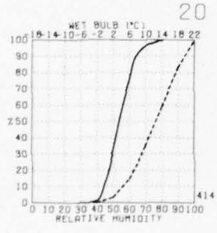


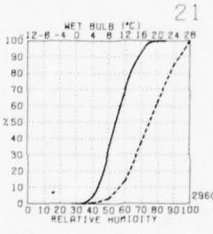


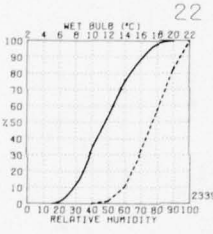


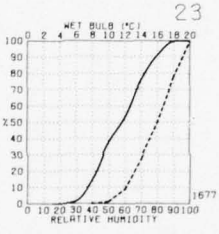


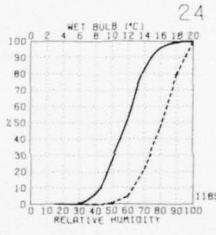


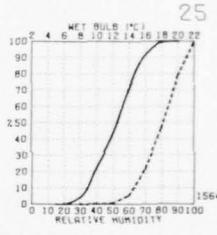


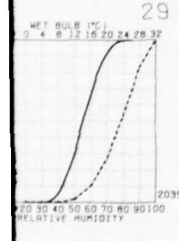


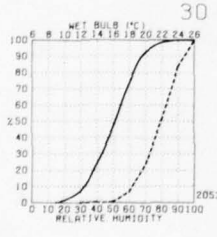


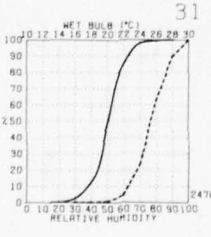


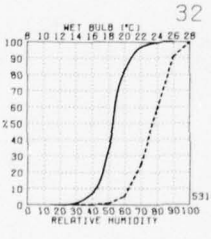


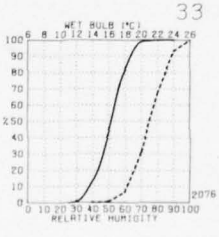


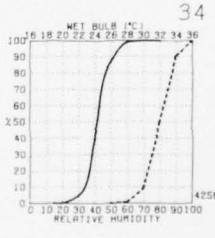


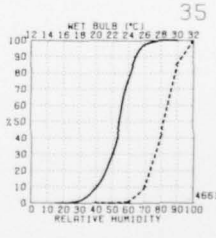


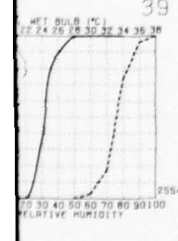


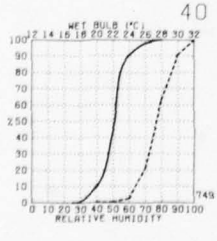


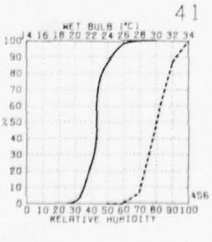


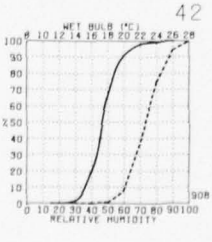


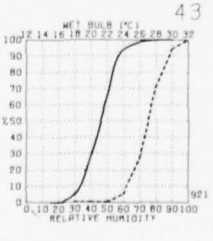


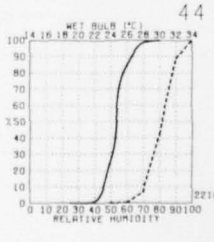


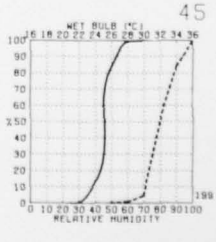






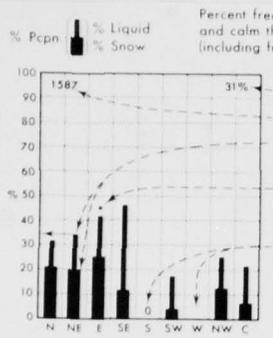






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MARCH



Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.

Percentage of present weather observations reporting precipitation.

Number of observations.

(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).

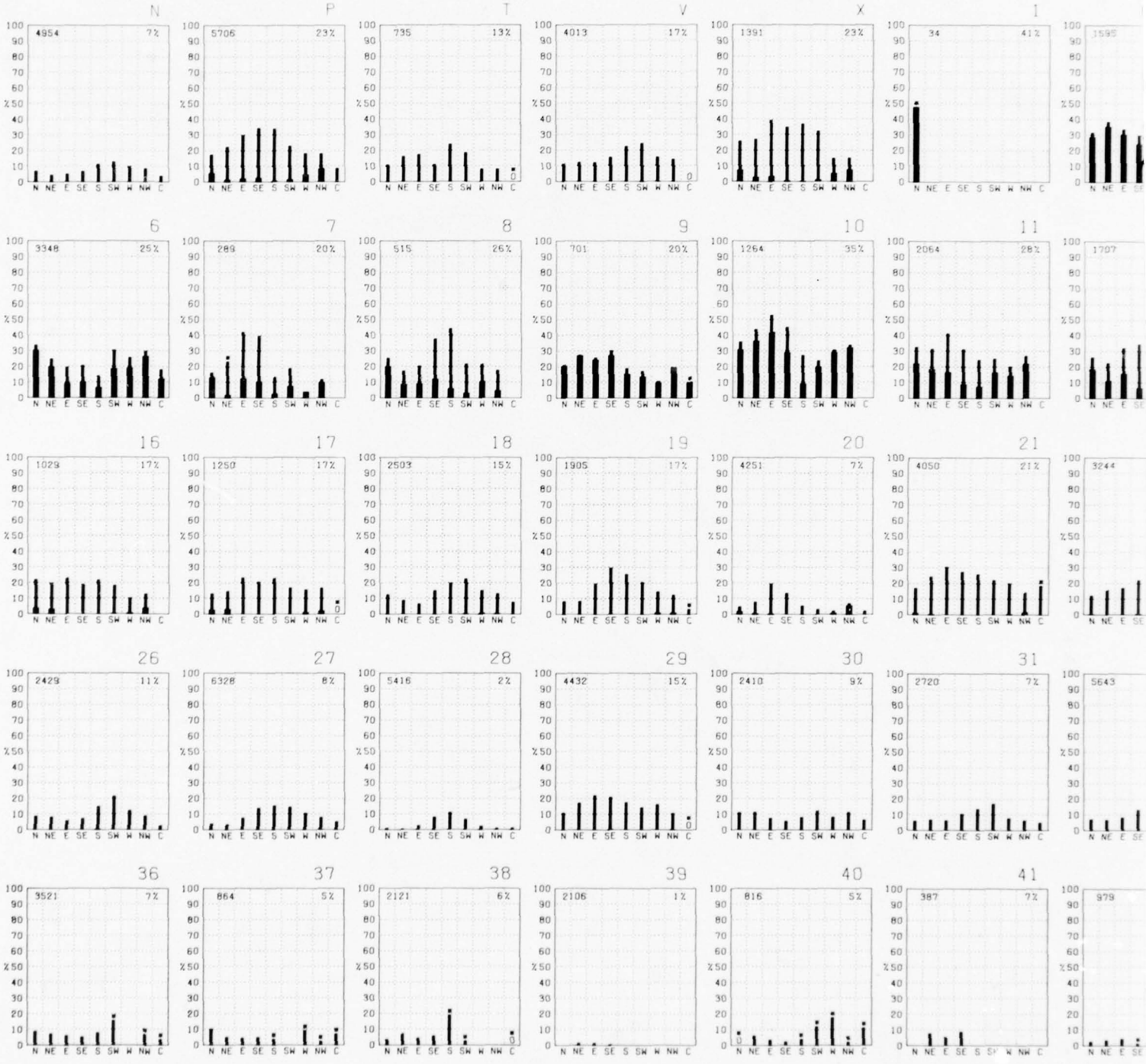
BLUE LINE - Percent frequency of precipitation observations reporting snow

RED LINE - Percent frequency of observations reporting precipitation

PRECIPITATION

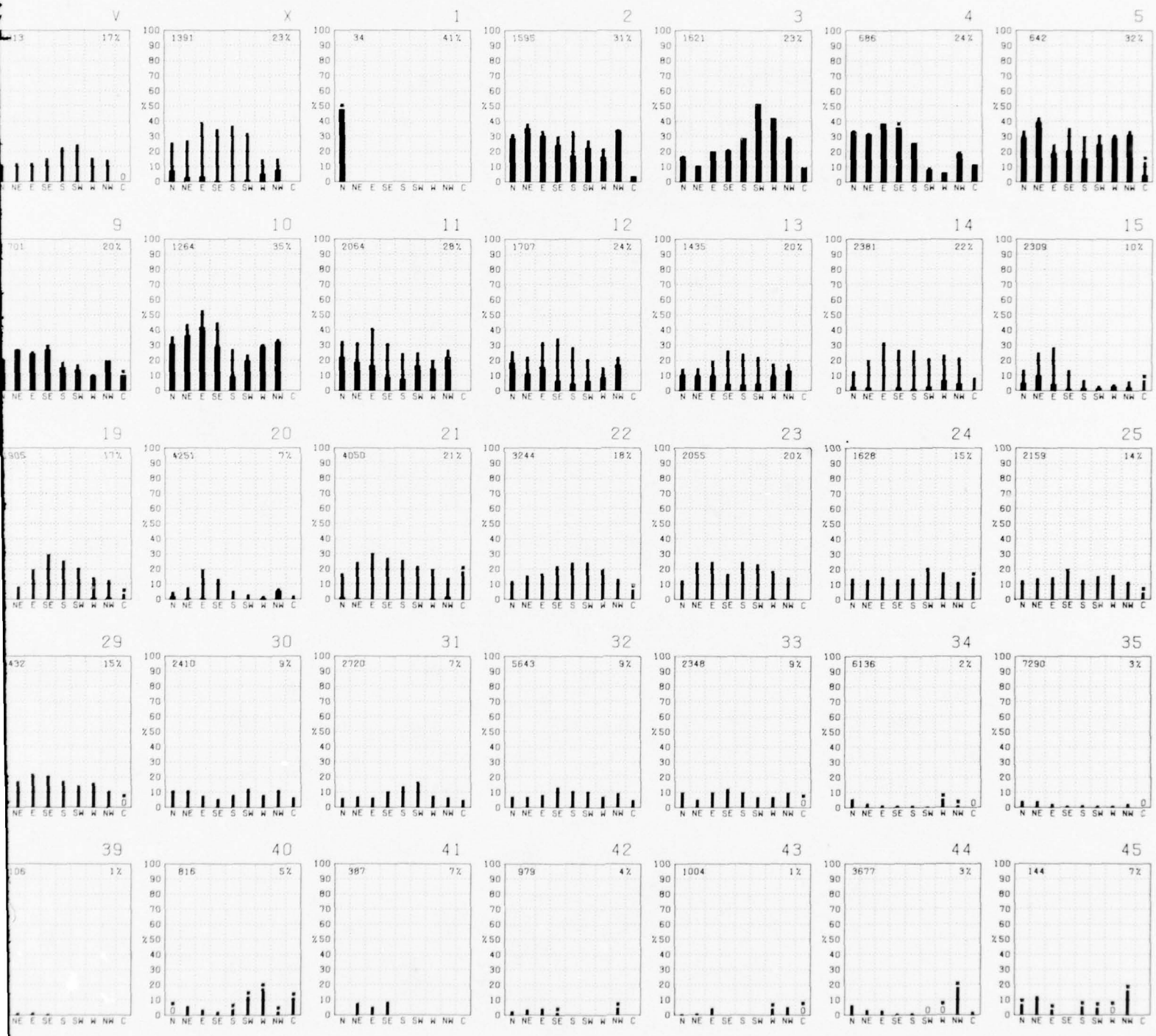


PRECIPITATION



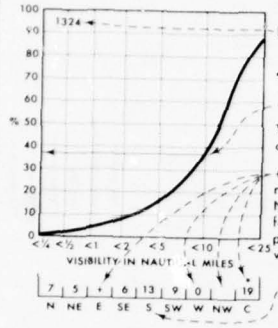
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MARCH



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MARCH



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of *all visibilities reported were <10 nautical miles.*)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

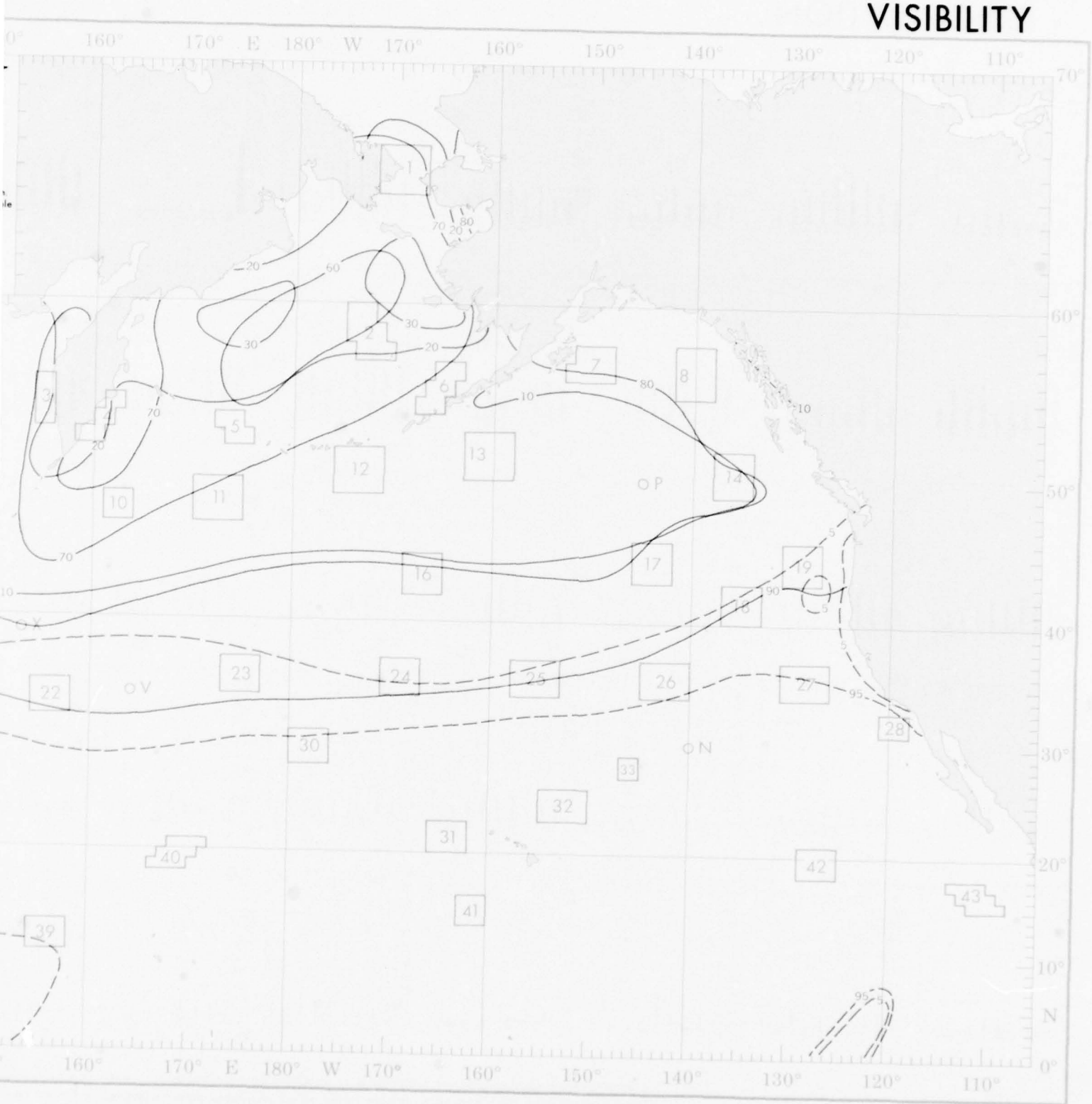
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of *all S winds were accompanied by visibilities <2 nautical miles.*)

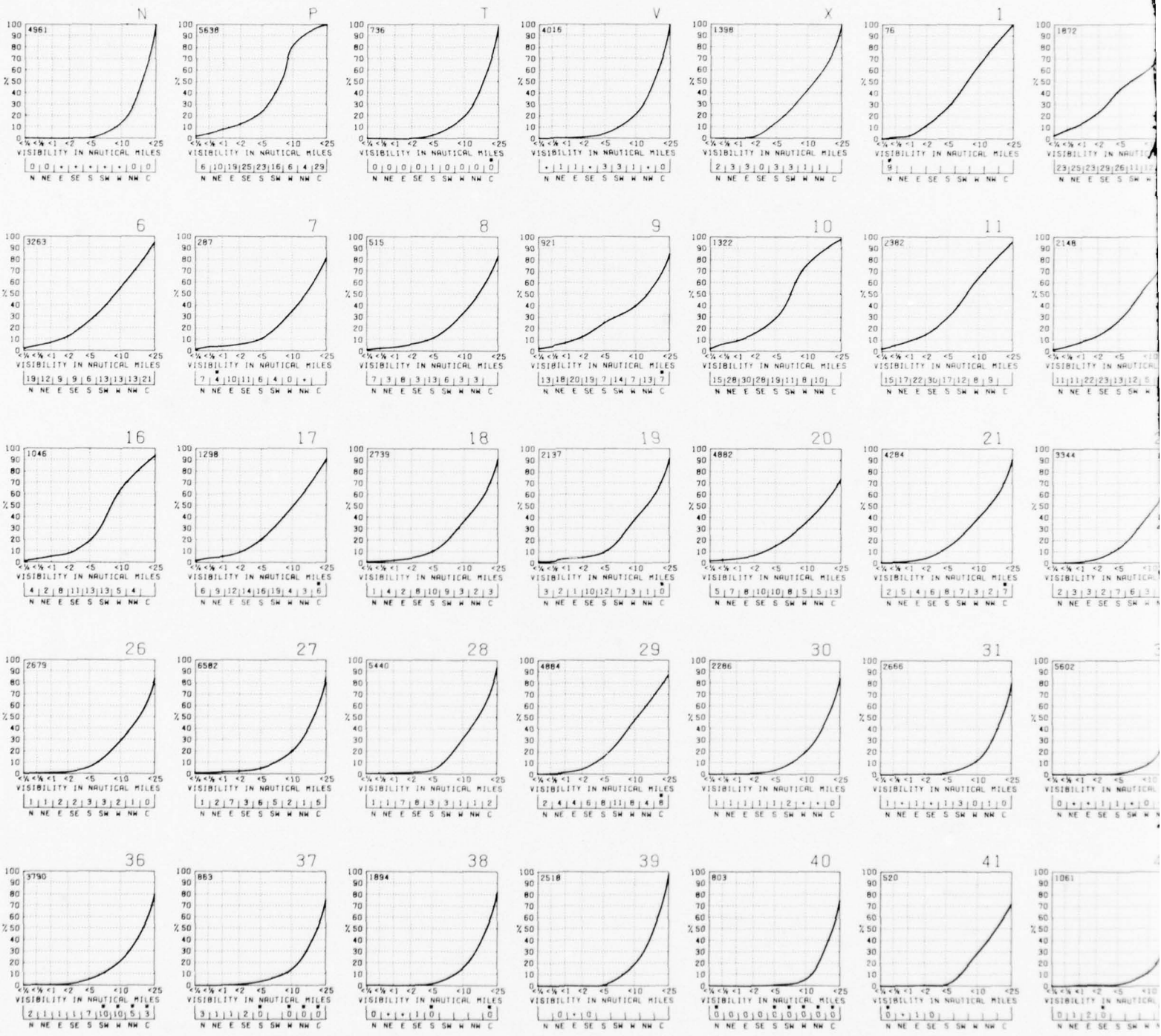
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles

VISIBILITY

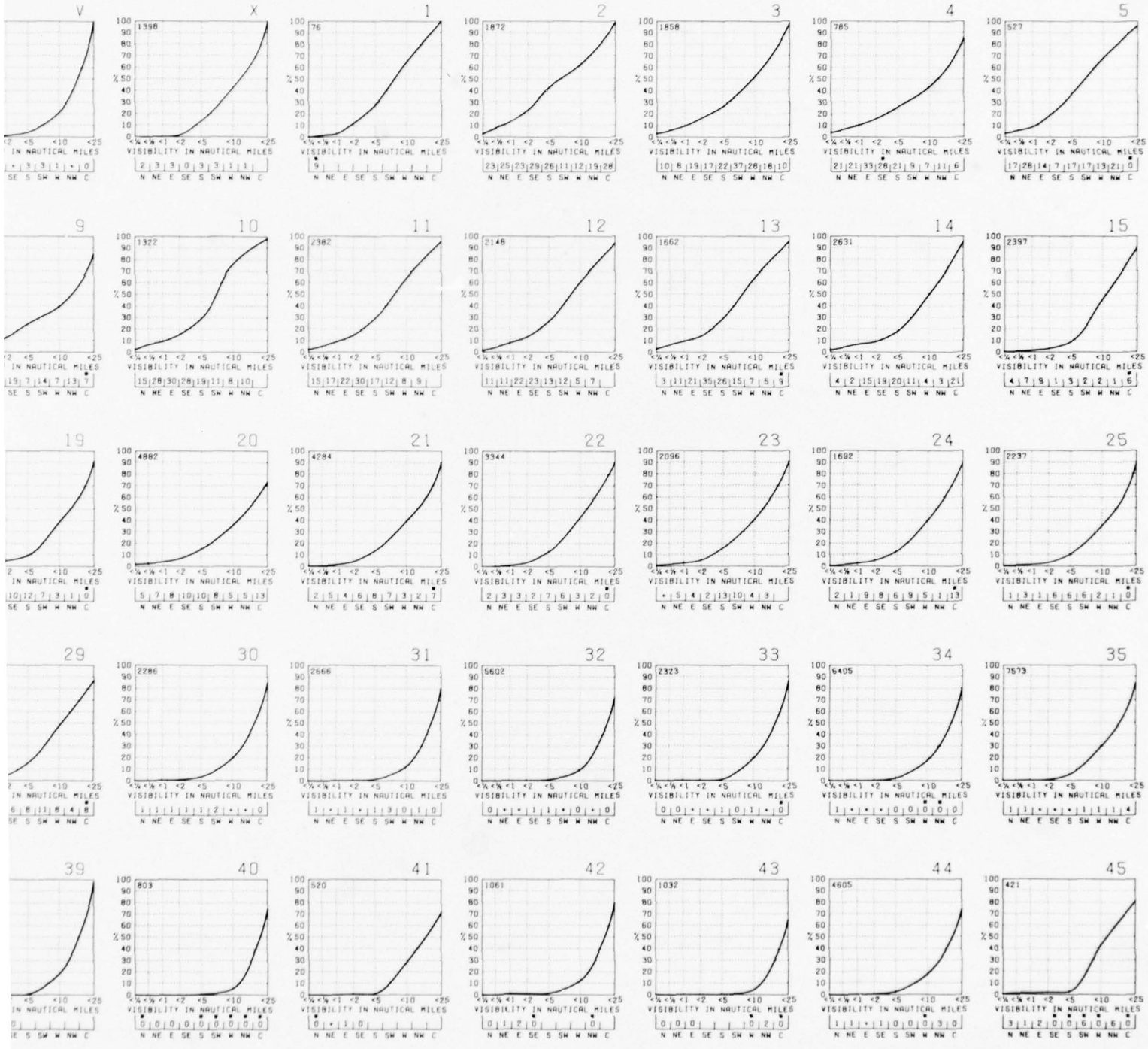

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1
2
3
4
5
6
7
8
10
11
12
13
14
16
17
18
19
22
23
24
25
26
27
28
30
31
32
33
39
40
41
42
43
OP
OV
ON
20
30
60
70
80
90
95
10
5

VISIBILITY



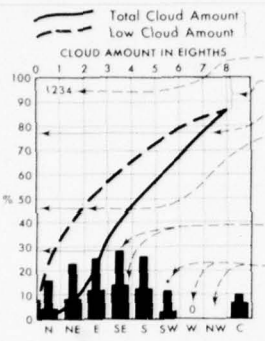
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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 ≥6/8 ≥7/8

Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

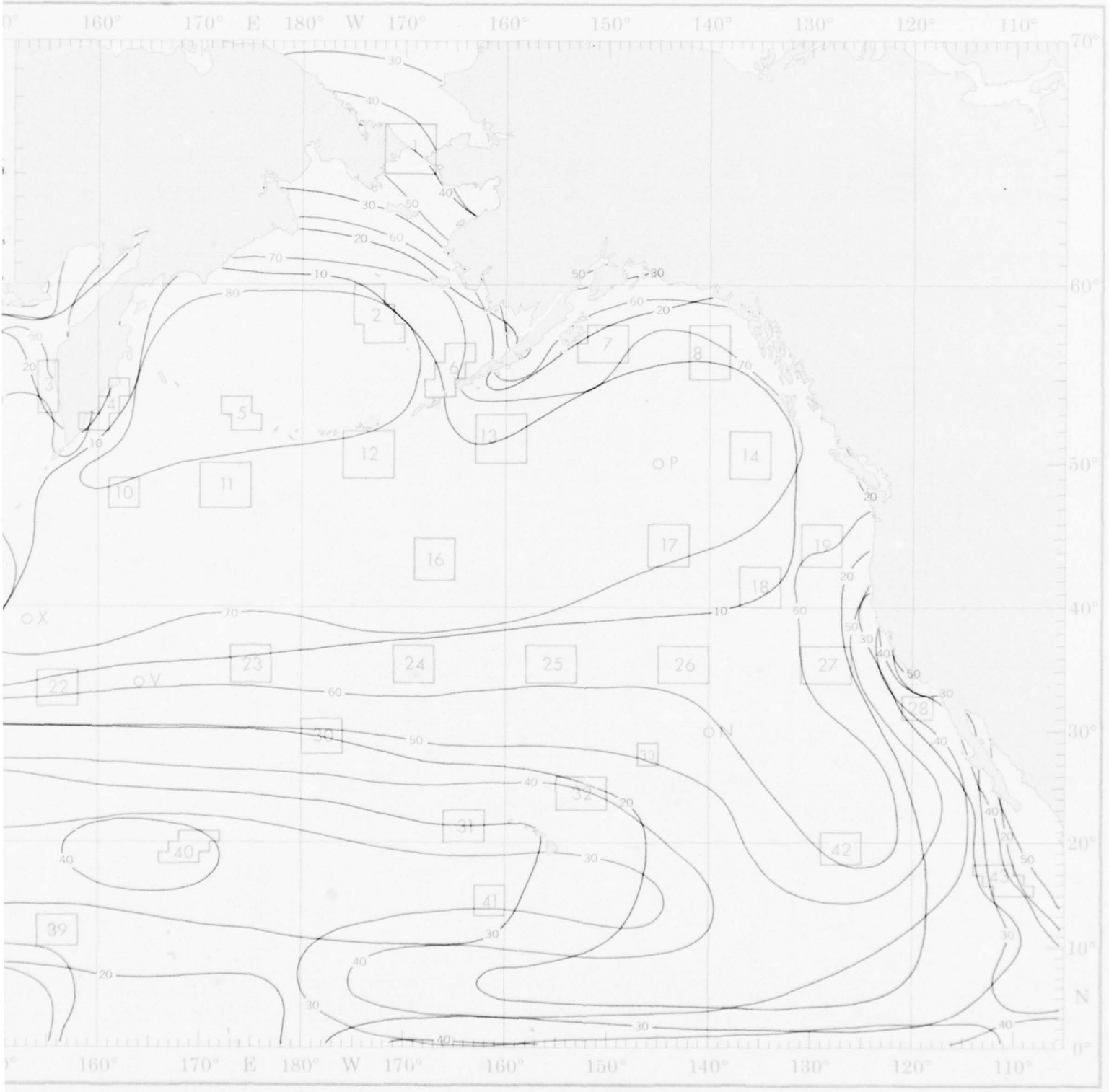
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

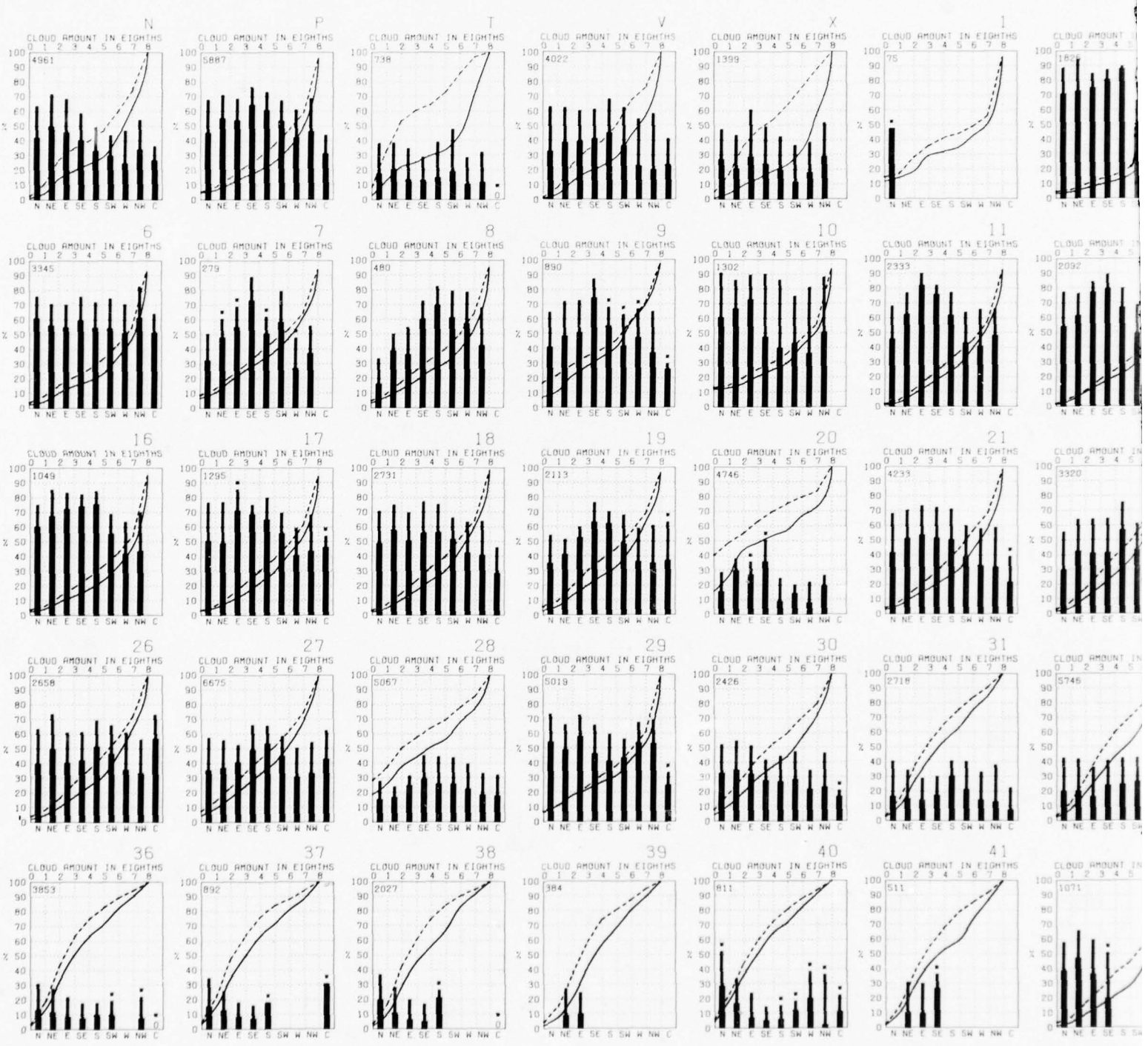
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

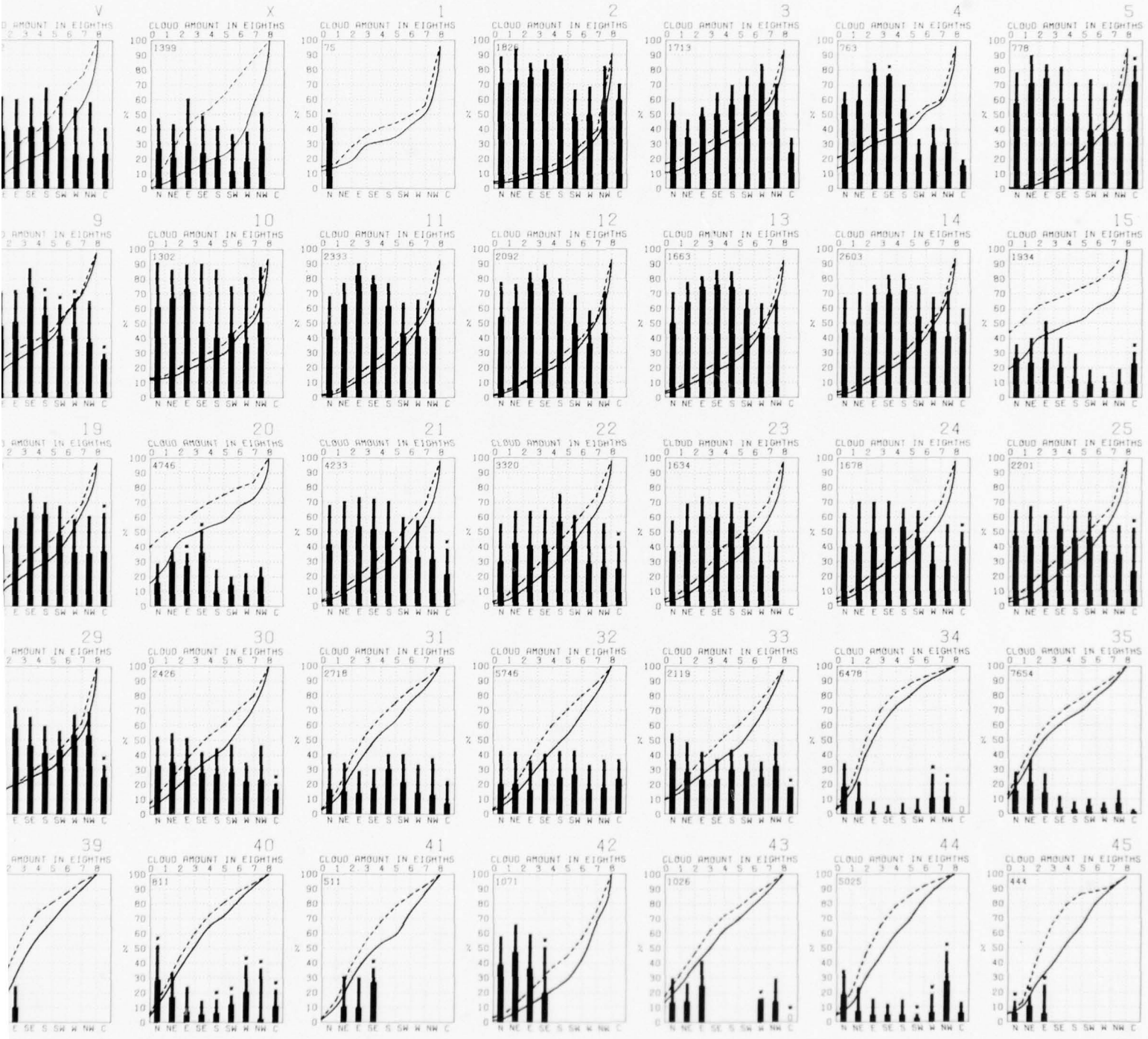

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
OP OX OY ON
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 39 40 41 42

CLOUD COVER



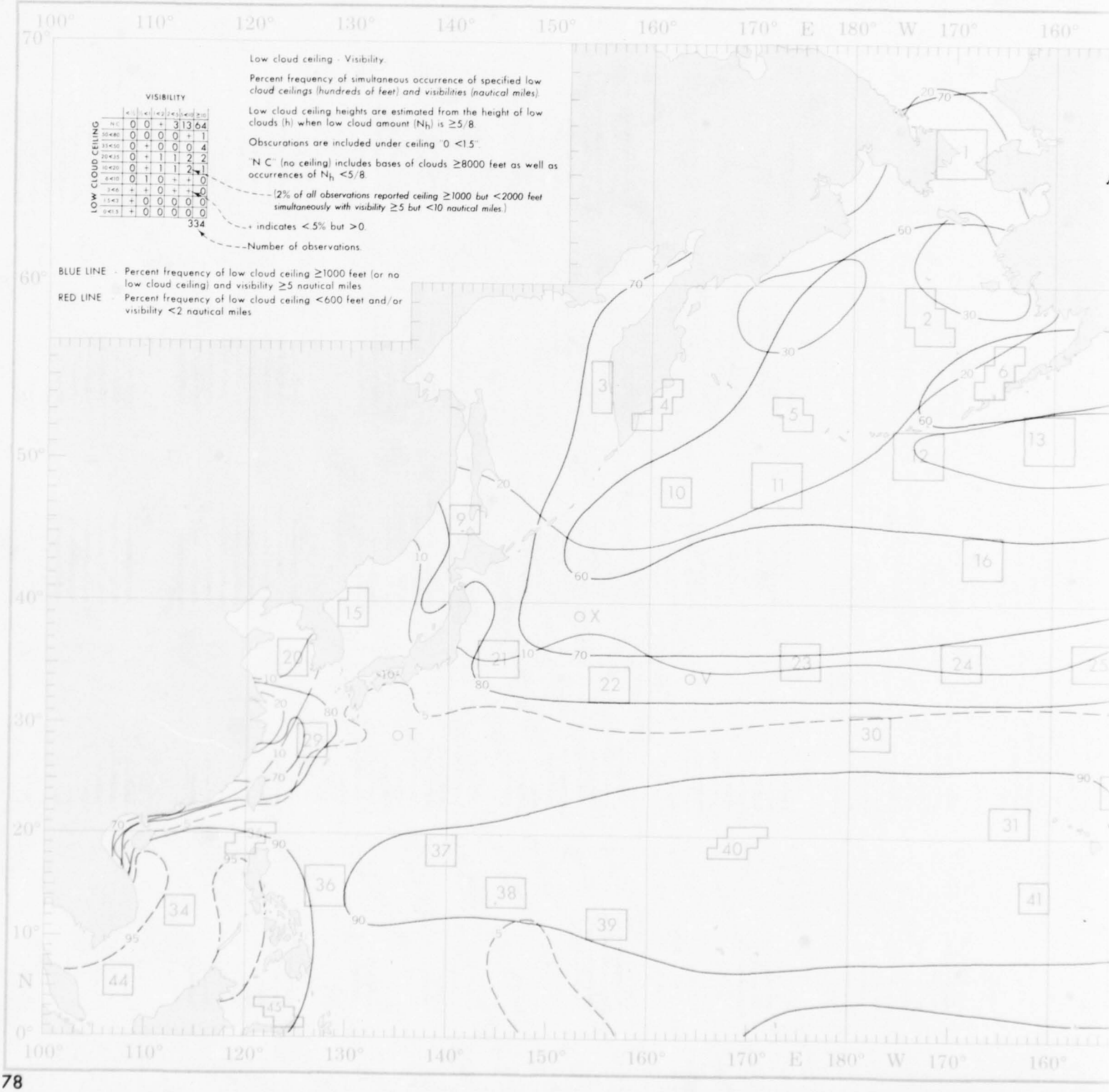
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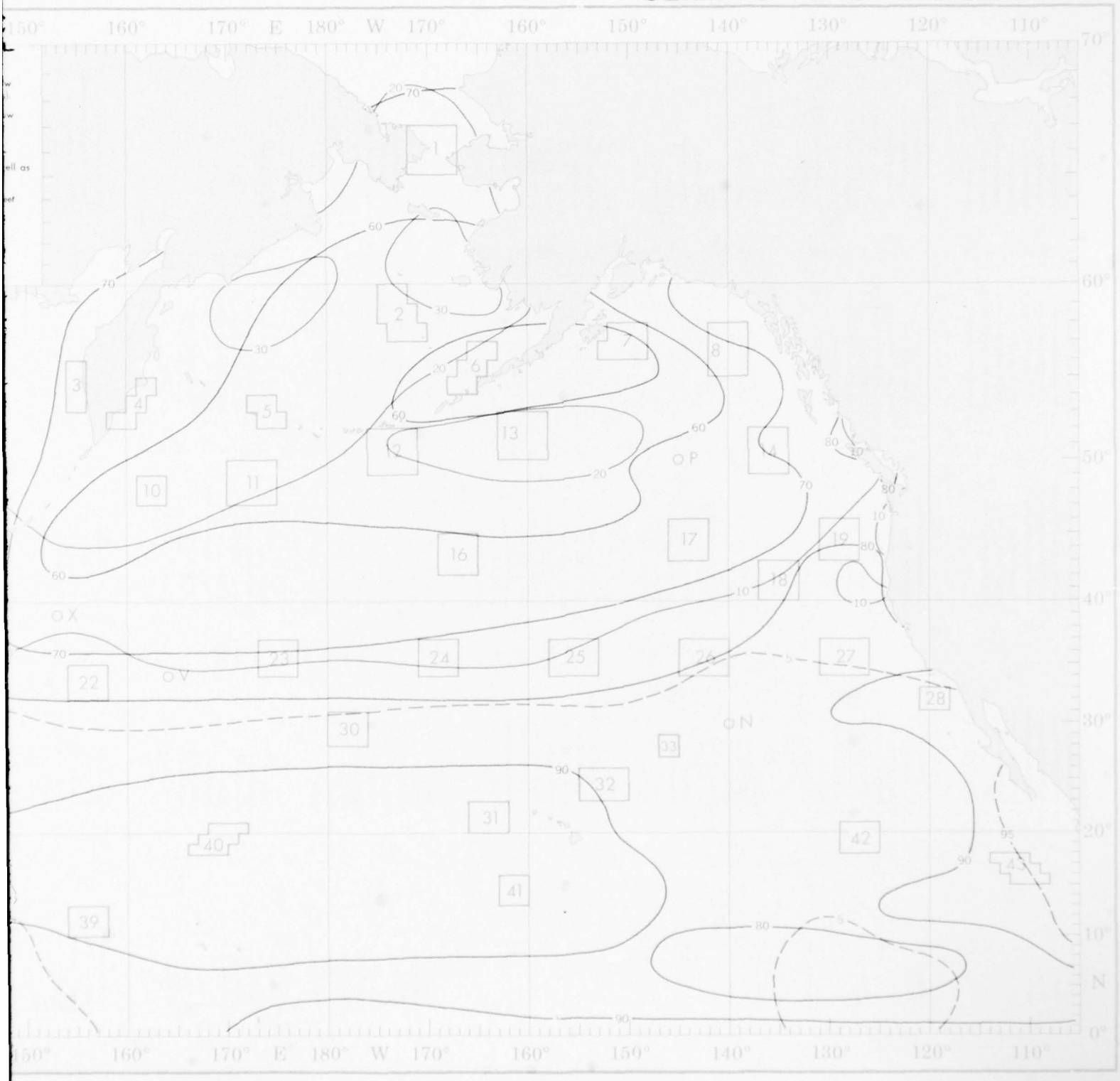


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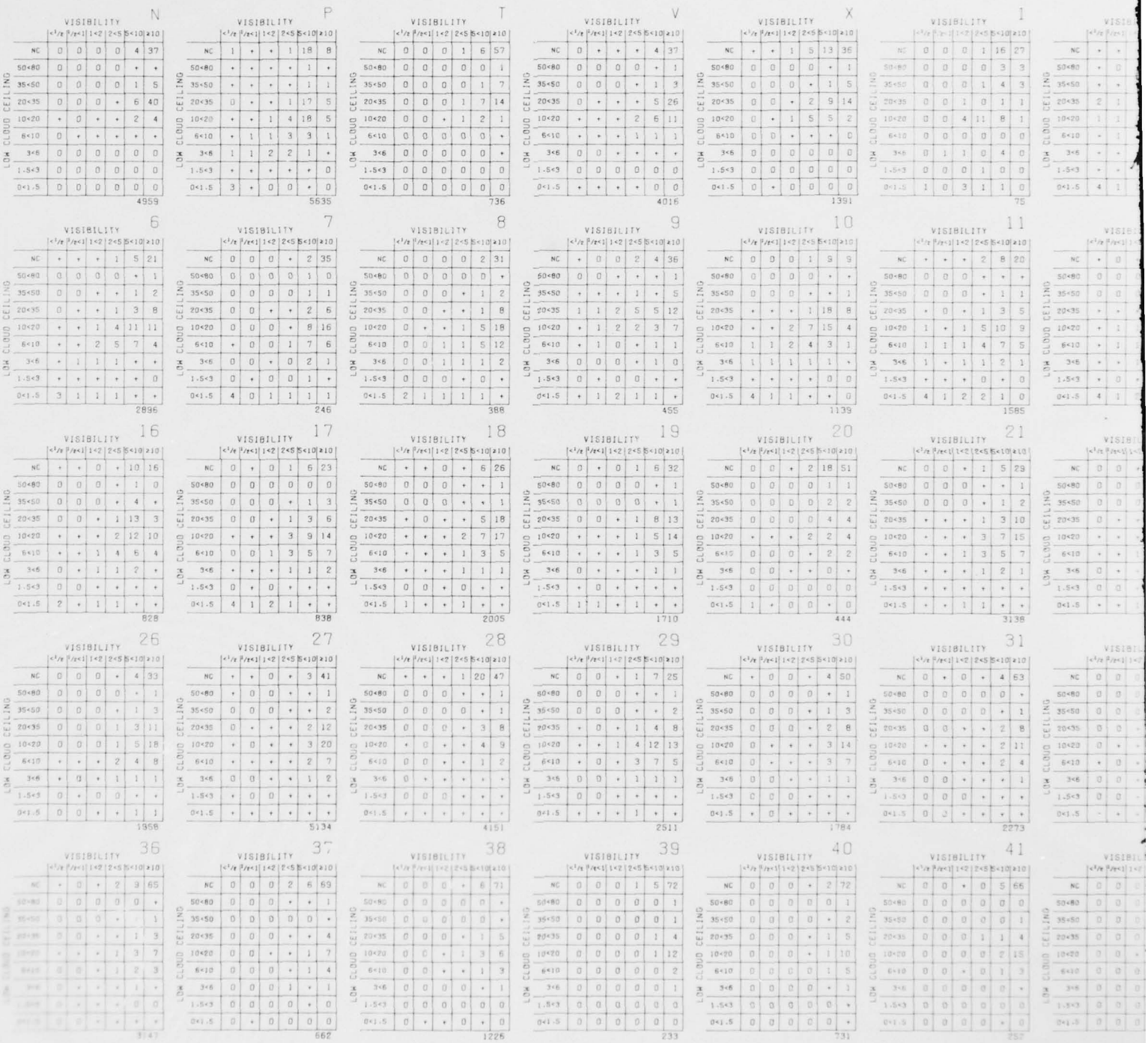
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Low cloud ceiling - Visibility.
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
N C 0 0 + 3 13 64
50<h<80 0 0 0 0 + 1
35<h<50 0 + 0 0 0 4
20<h<35 0 + 1 1 2 2
10<h<20 0 + 1 1 2 1
6<h<10 0 1 0 + + 0
3<h<6 + + 0 + + 0
1.5<h<3 + 0 0 0 0 0
0<h<1.5 + 0 0 0 0 0
334
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates < 5% but >0.
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 36 37 38 39 40 41 44 45
OX OV OT

CEILING AND VISIBILITY

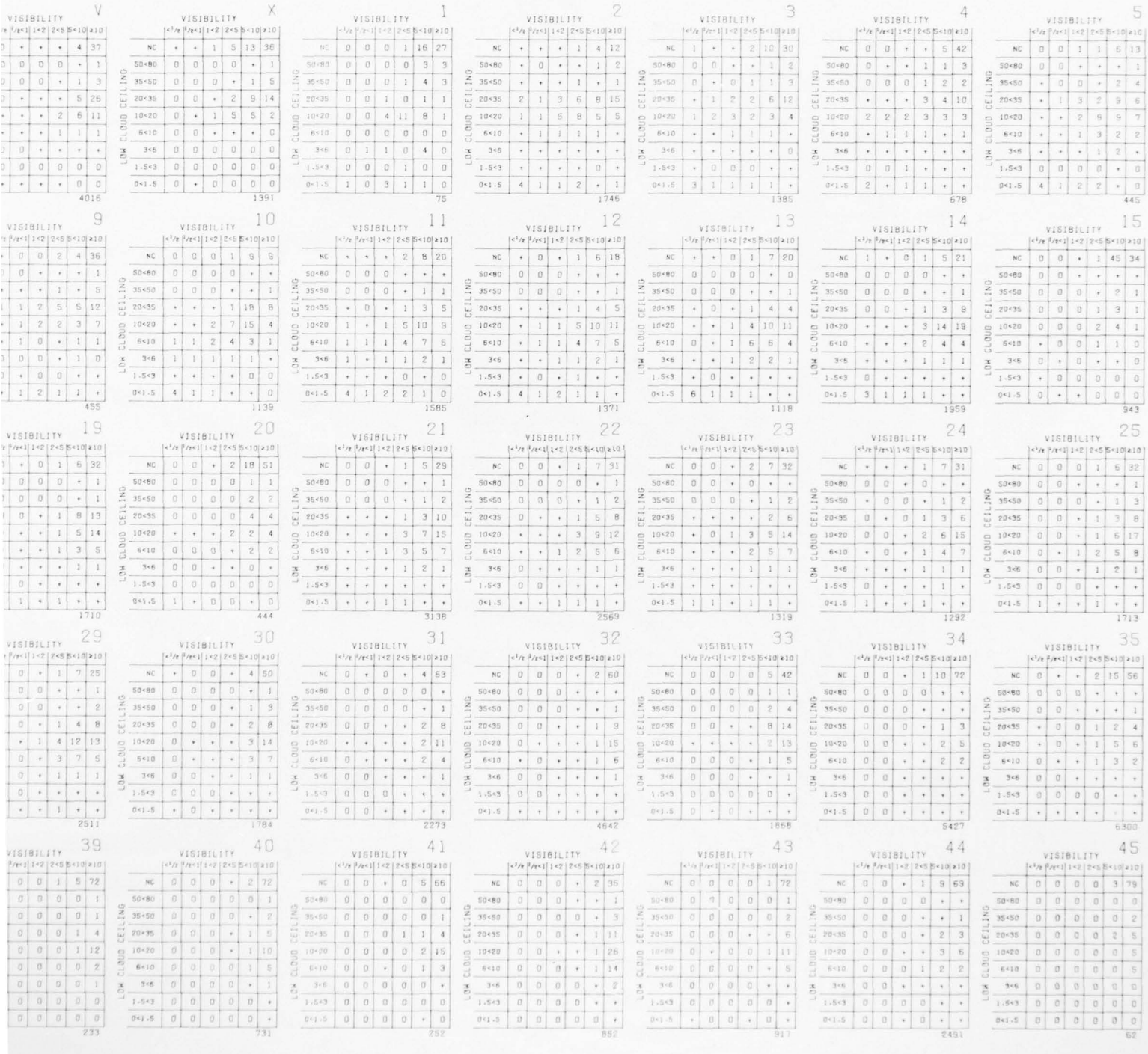


CEILING AND VISIBILITY



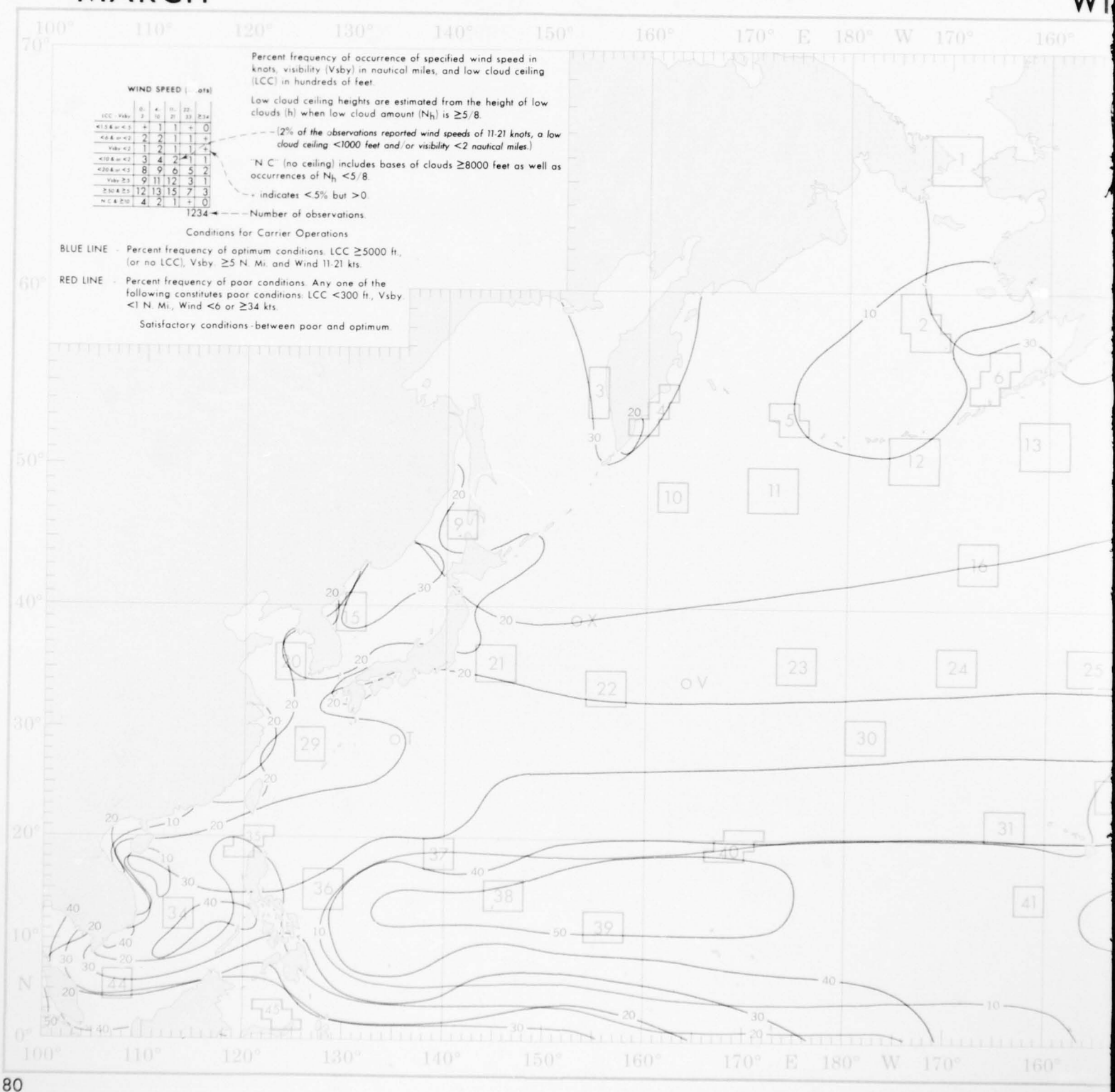
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LCC \ Vsby	0-2	4-10	11-21	22-33	≥34
<1.5 & or <5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
N.C. & ≥10	4	2	1	+	0
1234					

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	+	+	+	0
<20 & OR <5	+	2	4	1	+
VSBY ≥5	6	32	52	9	+
≥50 & ≥5	3	14	20	4	+
NC & ≥10	3	13	17	3	+

4952

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	1	2	6	5	2
VSBY <2	1	2	5	4	1
<10 & OR <2	1	3	8	8	3
<20 & OR <5	1	6	18	19	7
VSBY ≥5	2	11	30	26	8
≥50 & ≥5	1	4	11	8	2
NC & ≥10	+	1	3	3	1

5616

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	+	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	0	+	+	0
<20 & OR <5	0	1	2	2	+
VSBY ≥5	4	16	43	32	2
≥50 & ≥5	4	13	30	18	1
NC & ≥10	4	12	27	14	+

736

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	+	1	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	1	2	2	+
<20 & OR <5	+	2	9	9	4
VSBY ≥5	2	18	41	28	7
≥50 & ≥5	1	10	18	11	2
NC & ≥10	1	9	15	10	2

4009

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	1	1
VSBY <2	0	0	+	1	1
<10 & OR <2	0	0	+	1	1
<20 & OR <5	+	1	4	9	8
VSBY ≥5	3	10	32	31	10
≥50 & ≥5	2	8	19	16	4
NC & ≥10	2	7	15	10	1

1391

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	9	3	0	0
<6 & OR <2	0	21	3	0	0
VSBY <2	0	15	0	0	0
<10 & OR <2	0	21	3	0	0
<20 & OR <5	3	56	6	0	0
VSBY ≥5	3	47	3	0	0
≥50 & ≥5	0	26	3	0	0
NC & ≥10	0	9	0	0	0

34

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	3	1
<6 & OR <2	1	2	5	6	2
VSBY <2	1	1	4	5	2
<10 & OR <2	1	4	11	12	3
<20 & OR <5	2	11	23	19	4
VSBY ≥5	3	20	33	17	2
≥50 & ≥5	1	8	13	5	1
NC & ≥10	1	6	10	3	+

2826

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	3	0
<6 & OR <2	+	2	6	5	1
VSBY <2	+	1	3	2	+
<10 & OR <2	1	6	10	8	3
<20 & OR <5	1	12	20	16	5
VSBY ≥5	4	25	35	19	6
≥50 & ≥5	3	13	14	6	1
NC & ≥10	3	13	13	6	1

240

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	1	1
<6 & OR <2	+	3	6	3	1
VSBY <2	+	2	3	1	+
<10 & OR <2	+	7	14	7	3
<20 & OR <5	1	14	26	11	3
VSBY ≥5	3	28	36	18	5
≥50 & ≥5	3	13	11	6	2
NC & ≥10	3	12	10	5	2

386

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	3	1	1
<6 & OR <2	2	4	6	3	1
VSBY <2	1	3	5	3	1
<10 & OR <2	2	6	6	3	1
<20 & OR <5	3	12	14	6	2
VSBY ≥5	8	31	29	5	2
≥50 & ≥5	7	16	13	1	0
NC & ≥10	6	15	11	1	0

320

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	3	2	3
<6 & OR <2	0	1	6	6	6
VSBY <2	0	+	4	5	6
<10 & OR <2	0	2	9	8	7
<20 & OR <5	+	4	21	18	11
VSBY ≥5	1	10	33	23	5
≥50 & ≥5	1	3	10	4	1
NC & ≥10	+	2	6	2	+

1137

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	4	3	2
<6 & OR <2	+	3	6	6	5
VSBY <2	0	2	4	3	4
<10 & OR <2	+	5	12	12	6
<20 & OR <5	1	9	22	21	8
VSBY ≥5	1	15	31	20	5
≥50 & ≥5	1	8	13	5	1
NC & ≥10	1	5	9	4	+

1575

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	1	3	4	4	2
VSBY <2	+	2	2	1	1
<10 & OR <2	1	5	10	8	4
<20 & OR <5	1	8	22	17	6
VSBY ≥5	1	15	37	25	5
≥50 & ≥5	+	6	12	6	2
NC & ≥10	+	4	7	4	1

825

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	3	+
<6 & OR <2	+	3	5	5	1
VSBY <2	+	2	4	2	1
<10 & OR <2	1	5	11	10	3
<20 & OR <5	1	11	22	18	6
VSBY ≥5	2	17	34	21	6
≥50 & ≥5	1	7	14	7	1
NC & ≥10	1	5	11	5	+

834

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	1	3	2	+
VSBY <2	+	1	1	1	+
<10 & OR <2	+	3	7	4	1
<20 & OR <5	1	8	19	11	2
VSBY ≥5	5	20	44	21	4
≥50 & ≥5	3	7	15	7	1
NC & ≥10	2	6	12	5	1

1985

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	+
<6 & OR <2	+	2	3	2	1
VSBY <2	0	1	1	1	+
<10 & OR <2	+	3	6	5	1
<20 & OR <5	1	7	16	11	2
VSBY ≥5	3	20	43	23	4
≥50 & ≥5	2	10	19	8	1
NC & ≥10	2	9	15	6	1

1706

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	1	+	1	+	+
<10 & OR <2	1	3	3	+	1
<20 & OR <5	2	6	6	2	1
VSBY ≥5	5	34	37	16	1
≥50 & ≥5	4	28	26	12	+
NC & ≥10	3	22	18	7	+

440

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	1
<6 & OR <2	+	1	2	3	3
VSBY <2	+	+	1	1	2
<10 & OR <2	+	3	9	8	4
<20 & OR <5	+	7	21	17	6
VSBY ≥5	1	18	38	24	5
≥50 & ≥5	1	9	15	8	1
NC & ≥10	1	8	13	6	1

3126

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	1	3	1	+
VSBY <2	0	+	1	+	+
<10 & OR <2	1	5	9	4	1
<20 & OR <5	2	11	21	9	1
VSBY ≥5	4	28	45	16	2
≥50 & ≥5	2	12	18	6	1
NC & ≥10	2	10	16	4	1

1948

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	2	2	1	+
VSBY <2	+	1	1	+	0
<10 & OR <2	1	4	7	2	+
<20 & OR <5	1	10	20	6	1
VSBY ≥5	3	27	49	16	2
≥50 & ≥5	2	14	21	7	1
NC & ≥10	1	12	20	7	+

5109

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	+	1	+	+	0
<10 & OR <2	1	2	2	+	0
<20 & OR <5	1	8	9	1	+
VSBY ≥5	6	36	44	10	+
≥50 & ≥5	5	25	30	7	+
NC & ≥10	3	17	21	5	+

4134

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	1	4	2	+
VSBY <2	0	1	1	+	+
<10 & OR <2	+	4	11	6	1
<20 & OR <5	1	10	26	14	1
VSBY ≥5	3	24	43	16	2
≥50 & ≥5	2	12	16	3	+
NC & ≥10	2	10	12	1	+

2503

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	2	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	8	2	1
<20 & OR <5	1	8	18	4	1
VSBY ≥5	3	30	52	11	2
≥50 & ≥5	2	19	28	5	1
NC & ≥10	2	17	25	4	1

1779

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	5	12	5	+
VSBY ≥5	4	30	53	11	+
≥50 & ≥5	3	23	35	5	+
NC & ≥10	3	22	33	4	+

2265

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	1	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	4	2	+
<20 & OR <5	+	5	12	3	+
VSBY ≥5	4	40	45	6	+
≥50 & ≥5	4	35	33	3	+
NC & ≥10	3	30	29	2	+

3143

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	3	4	1	0
<20 & OR <5	+	6	9	3	0
VSBY ≥5	6	37	47	6	+
≥50 & ≥5	5	32	36	3	+
NC & ≥10	5	27	34	3	+

659

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	+	1	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	1	3	2	0
<20 & OR <5	+	2	10	3	0
VSBY ≥5	2	22	64	10	0
≥50 & ≥5	2	19	51	6	0
NC & ≥10	2	18	46	5	0

1223

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	3	+	0
<20 & OR <5	0	2	13	2	0
VSBY ≥5	2	17	69	12	0
≥50 & ≥5	2	13	52	10	0
NC & ≥10	2	13	47	10	0

230

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	+	4	11	3	+
VSBY ≥5	4	31	56	9	+
≥50 & ≥5	3	26	41	4	0
NC & ≥10	3	25	39	4	0

729

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	+	0
<10 & OR <2	0	+	4	1	0
<20 & OR <5	0	3	16	4	0
VSBY ≥5	2	17	60	20	0
≥50 & ≥5	2	14	40	16	0
NC & ≥10	2	13	39	12	0

241

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

LITY-WIND

MARCH

V

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	0	+	+	+	+
	+	+	1	1	+
	+	+	+	+	+
	+	1	2	2	+
	+	2	9	9	4
	2	18	41	28	7
	1	10	18	11	2
	1	9	15	10	2

4009

X

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	0
<6 & OR <2	0	0	+	1	1
VSBY <2	0	0	+	1	1
<10 & OR <2	0	0	+	1	1
<20 & OR <5	+	1	4	9	8
VSBY ≥5	3	10	32	31	10
≥50 & ≥5	2	8	19	16	4
NC & ≥10	2	7	15	10	1

1391

1

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	9	3	0	0
<6 & OR <2	0	21	3	0	0
VSBY <2	0	15	0	0	0
<10 & OR <2	0	21	3	0	0
<20 & OR <5	3	56	6	0	0
VSBY ≥5	3	47	3	0	0
≥50 & ≥5	0	26	3	0	0
NC & ≥10	0	9	0	0	0

34

2

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	5	2	1
<6 & OR <2	2	6	10	7	2
VSBY <2	2	4	9	6	2
<10 & OR <2	2	6	12	7	2
<20 & OR <5	2	11	25	13	3
VSBY ≥5	4	16	28	9	1
≥50 & ≥5	3	7	8	2	+
NC & ≥10	1	5	4	1	0

1530

3

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	4	2	1
<6 & OR <2	2	6	7	4	2
VSBY <2	2	5	6	3	1
<10 & OR <2	2	7	7	4	2
<20 & OR <5	3	14	10	5	2
VSBY ≥5	11	39	21	3	1
≥50 & ≥5	9	24	10	2	+
NC & ≥10	7	17	6	+	+

1192

4

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	3	3	1
<6 & OR <2	1	2	6	7	2
VSBY <2	1	1	6	6	2
<10 & OR <2	1	2	7	7	3
<20 & OR <5	2	5	11	11	3
VSBY ≥5	9	25	27	13	2
≥50 & ≥5	8	17	17	7	1
NC & ≥10	7	15	13	6	1

595

5

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	2	1
<6 & OR <2	0	3	8	7	2
VSBY <2	0	3	7	5	1
<10 & OR <2	0	4	9	11	3
<20 & OR <5	3	11	20	19	3
VSBY ≥5	2	15	30	18	2
≥50 & ≥5	1	6	10	4	+
NC & ≥10	1	4	8	2	+

360

9

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	1	2	3	1	1
	2	4	6	3	1
	1	3	5	3	1
	2	6	6	3	1
	3	12	14	6	2
	8	31	29	5	2
	7	16	13	1	0
	6	15	11	1	0

320

10

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	3	2	3
<6 & OR <2	+	3	6	6	5
VSBY <2	0	+	4	5	6
<10 & OR <2	0	2	9	8	7
<20 & OR <5	+	4	21	18	11
VSBY ≥5	1	10	33	23	5
≥50 & ≥5	1	3	10	4	1
NC & ≥10	+	2	6	2	+

1137

11

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	4	3	2
<6 & OR <2	+	3	6	6	5
VSBY <2	0	2	4	3	4
<10 & OR <2	+	5	12	12	6
<20 & OR <5	1	9	22	21	8
VSBY ≥5	1	15	31	20	5
≥50 & ≥5	1	8	13	5	1
NC & ≥10	1	5	9	4	+

1575

12

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	3	3	2
<6 & OR <2	+	3	7	6	3
VSBY <2	+	2	4	4	2
<10 & OR <2	+	7	13	10	5
<20 & OR <5	1	14	25	18	8
VSBY ≥5	1	19	31	18	5
≥50 & ≥5	1	7	11	6	1
NC & ≥10	+	5	9	4	1

1243

13

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	3	1
<5 & OR <2	+	3	8	6	3
VSBY <2	+	2	5	4	2
<10 & OR <2	+	6	14	12	4
<20 & OR <5	1	11	28	20	6
VSBY ≥5	1	15	34	18	3
≥50 & ≥5	+	7	13	5	1
NC & ≥10	+	6	9	4	+

1110

14

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	1	+
<6 & OR <2	1	3	6	3	1
VSBY <2	1	2	4	1	+
<10 & OR <2	1	4	11	6	2
<20 & OR <5	2	10	29	15	4
VSBY ≥5	3	19	39	17	5
≥50 & ≥5	1	7	12	5	1
NC & ≥10	1	6	10	3	1

1941

15

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	+	1	+
VSBY <2	+	+	+	+	0
<10 & OR <2	+	+	1	1	+
<20 & OR <5	1	3	4	4	1
VSBY ≥5	4	28	45	15	2
≥50 & ≥5	4	24	40	11	1
NC & ≥10	2	11	14	6	1

941

19

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	0	1	1	1	+
	+	2	3	2	1
	0	1	1	1	+
	+	3	6	5	1
	1	7	16	11	2
	3	20	43	23	4
	2	10	19	8	1
	2	9	15	6	1

1706

20

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	0
<6 & OR <2	1	1	1	+	+
VSBY <2	1	+	1	+	+
<10 & OR <2	1	3	3	+	1
<20 & OR <5	2	6	6	2	1
VSBY ≥5	5	34	37	16	1
≥50 & ≥5	4	28	26	12	+
NC & ≥10	3	22	18	7	+

440

21

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	1
<6 & OR <2	+	1	2	3	3
VSBY <2	+	+	1	1	2
<10 & OR <2	+	3	9	8	4
<20 & OR <5	+	7	21	17	6
VSBY ≥5	1	18	38	24	5
≥50 & ≥5	1	9	15	8	1
NC & ≥10	1	8	13	6	1

3126

22

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	3	1
VSBY <2	+	+	1	1	1
<10 & OR <2	+	2	7	7	3
<20 & OR <5	1	6	17	16	6
VSBY ≥5	2	17	37	25	8
≥50 & ≥5	1	9	17	9	3
NC & ≥10	1	8	14	7	2

2558

23

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	1
<6 & OR <2	0	2	3	3	3
VSBY <2	0	1	1	1	1
<10 & OR <2	+	4	9	8	4
<20 & OR <5	+	8	21	14	6
VSBY ≥5	2	17	40	21	6
≥50 & ≥5	1	9	18	9	3
NC & ≥10	1	8	16	6	2

1314

24

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	+	+
<6 & OR <2	+	2	5	2	1
VSBY <2	+	1	2	1	+
<10 & OR <2	+	5	11	6	1
<20 & OR <5	1	12	22	11	2
VSBY ≥5	2	27	38	18	3
≥50 & ≥5	1	13	15	8	1
NC & ≥10	1	11	12	5	1

1291

25

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	+
<6 & OR <2	+	2	4	2	+
VSBY <2	+	1	1	1	+
<10 & OR <2	+	4	11	6	1
<20 & OR <5	1	11	23	11	2
VSBY ≥5	3	25	45	16	2
≥50 & ≥5	2	12	19	6	+
NC & ≥10	1	10	16	5	+

1708

29

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	+	1	1	1	+
	+	1	4	2	+
	0	1	1	+	+
	+	4	11	6	1
	1	10	26	14	1
	3	24	43	16	2
	2	12	16	3	+
	2	10	12	1	+

2503

30

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	2	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	8	2	1
<20 & OR <5	1	8	18	4	1
VSBY ≥5	3	30	52	11	2
≥50 & ≥5	2	19	28	5	1
NC & ≥10	2	17	25	4	1

1779

31

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	5	12	5	+
VSBY ≥5	4	30	53	11	+
≥50 & ≥5	3	23	35	5	+
NC & ≥10	3	22	33	4	+

2265

32

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	1	1	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	5	15	6	+
VSBY ≥5	2	25	57	14	1
≥50 & ≥5	2	18	36	7	+
NC & ≥10	2	17	34	6	+

4627

33

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	1	+	0
VSBY <2	+	+	+	+	0
<10 & OR <2	+	2	4	2	+
<20 & OR <5	+	6	12	4	+
VSBY ≥5	3	25	58	12	+
≥50 & ≥5	2	14	28	4	0
NC & ≥10	2	13	23	4	0

1863

34

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	3	2	+
<20 & OR <5	+	4	7	3	+
VSBY ≥5	4	46	42	6	+
≥50 & ≥5	4	42	33	3	+
NC & ≥10	3	39	28	2	0

5417

35

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	1	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	1	3	3	+
<20 & OR <5	1	3	9	8	1
VSBY ≥5	7	30	41	16	1
≥50 & ≥5	7	26	30	8	1
NC & ≥10	5	22	24	5	+

6267

39

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	0	0	0	0	0
	0	1	0	0	0
	0	0	0	0	0
	0	0	3	+	0
	0	2	13	2	0
	2	17	69	12	0
	2	13	52	10	0
	2	13	47	10	0

230

40

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	+	4	11	3	+
VSBY ≥5	4	31	56	9	+
≥50 & ≥5	3	26	41	4	0
NC & ≥10	3	25	39	4	0

729

41

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	+	0
VSBY <2	0	0	0	+	0
<10 & OR <2	0	+	4	1	0
<20 & OR <5	0	3	16	4	0
VSBY ≥5	2	17	60	20	0
≥50 & ≥5	2	14	40	16	0
NC & ≥10	2	13	39	12	0

241

42

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	2	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	4	13	1	0
<20 & OR <5	+	11	32	3	0
VSBY ≥5	1	28	63	7	0
≥50 & ≥5	1	13	23	2	0
NC & ≥10	1	12	21	2	0

850

43

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	+	0	+	0
<10 & OR <2	+	3	3	+	0
<20 & OR <5	1	10	7	1	0
VSBY ≥5	7	55	37	1	0
≥50 & ≥5	6	41	26	1	0
NC & ≥10	6	40	25	1	0

916

44

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	2	3	1	+
<20 & OR <5	1	6	8	1	+
VSBY ≥5	13	50	33	2	+
≥50 & ≥5	11	42	23	1	+
NC & ≥10	11	38	19	+	+

2460

45

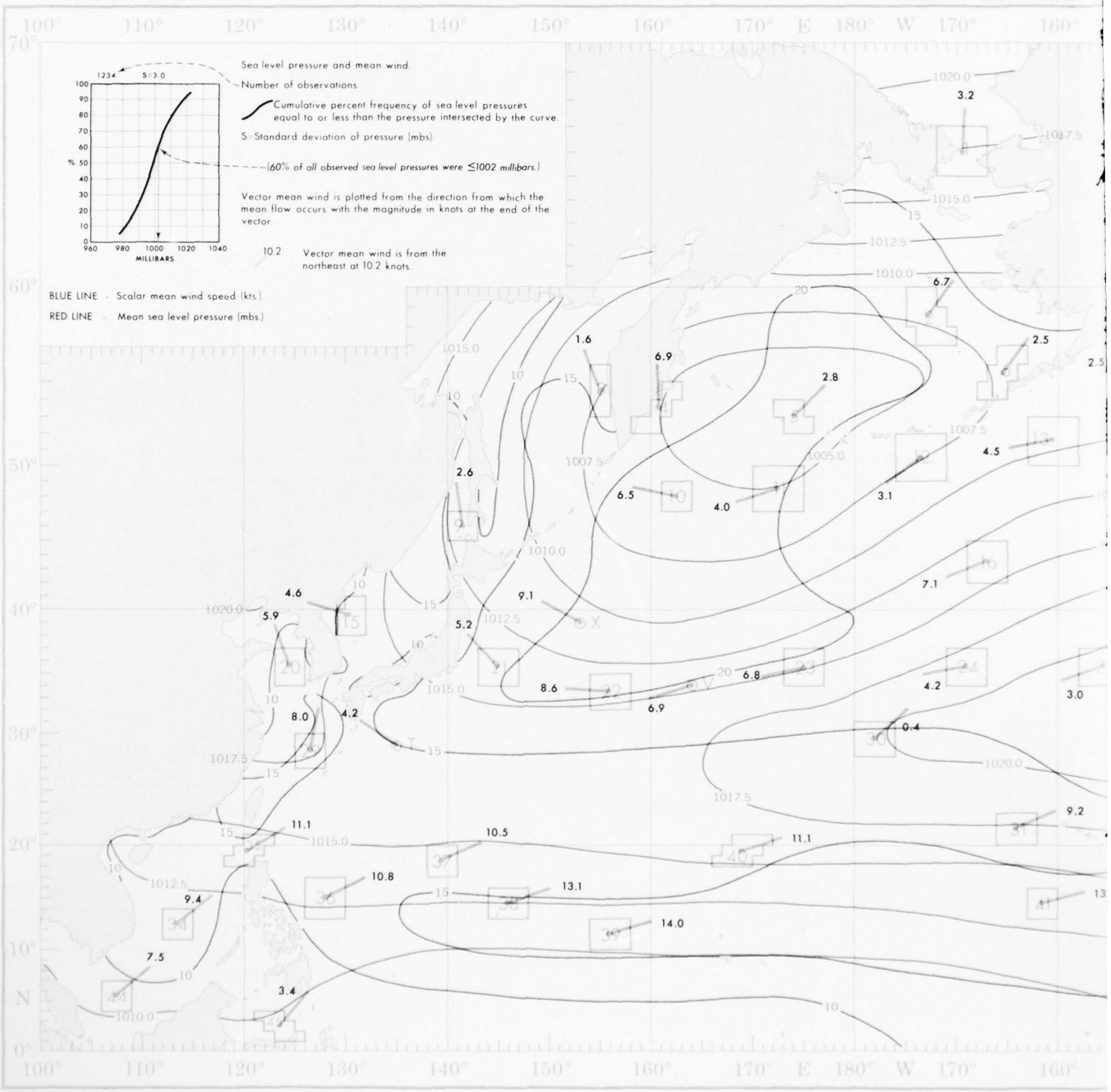
WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
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VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	3	0	0
<20 & OR <5	0	5	5	0	0
VSBY ≥5	16	52	32	0	0
≥50 & ≥5	16	40	26	0	0
NC & ≥10	16	39	24	0	0

62

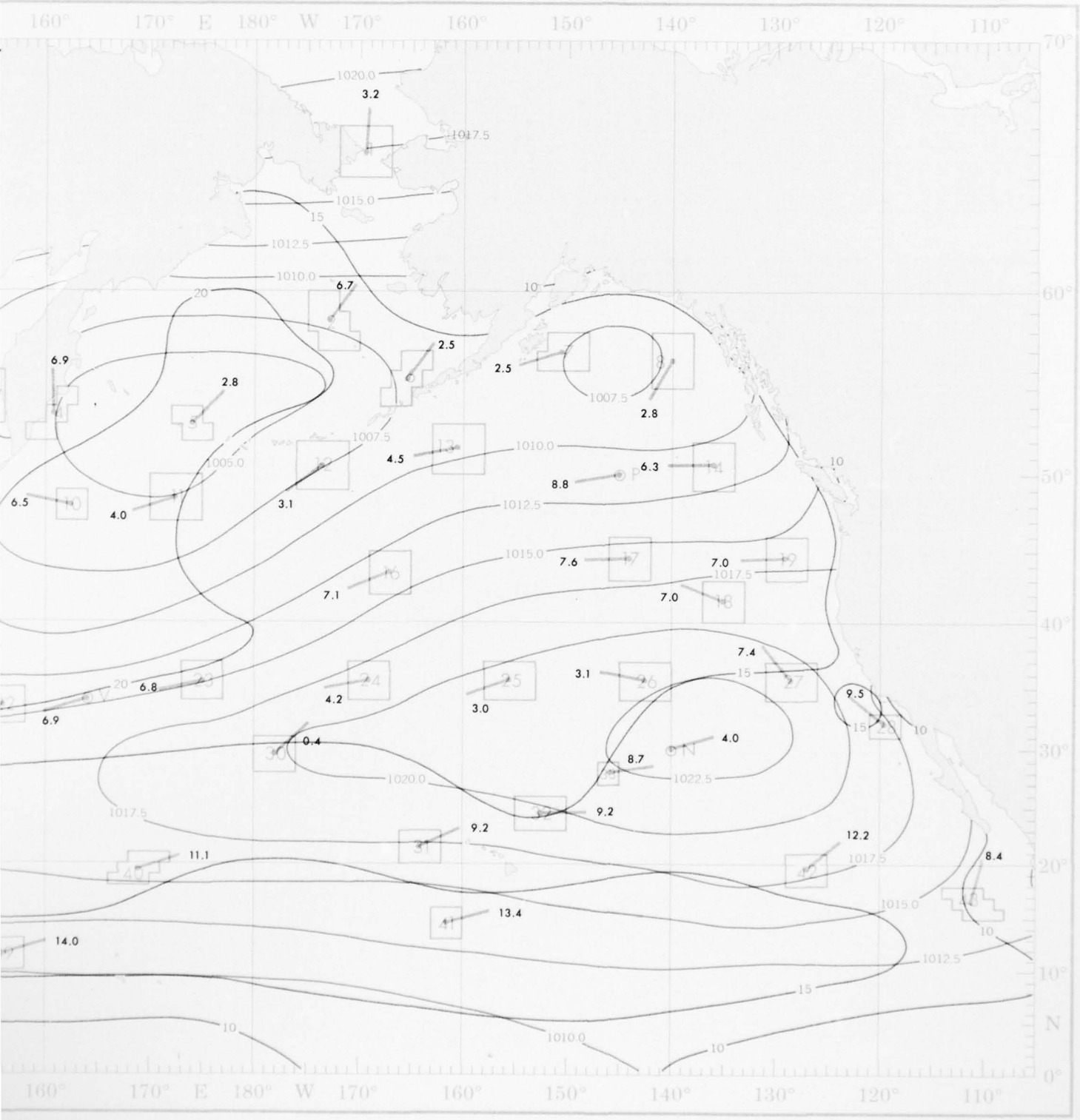
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(opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

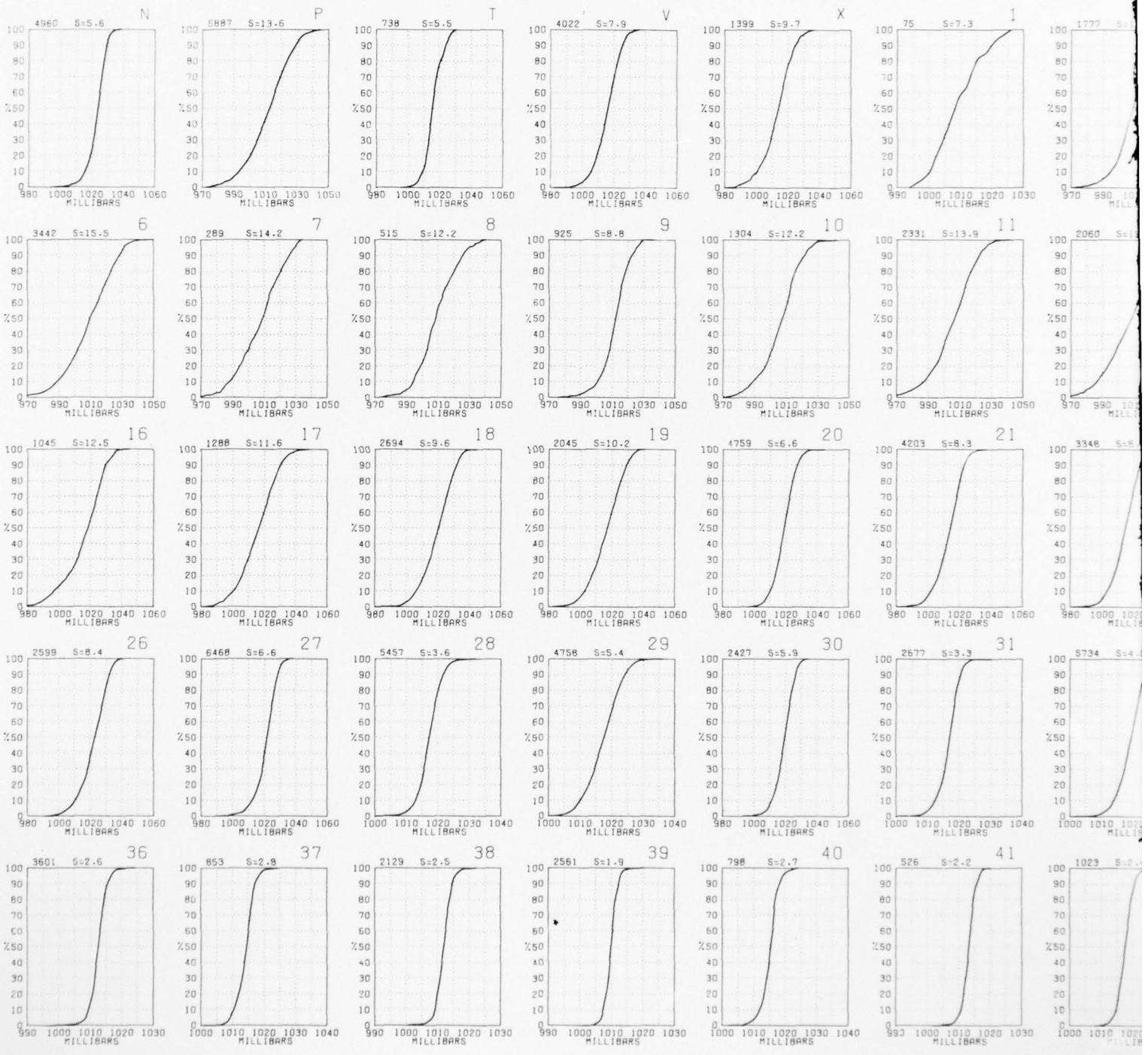
SEA LEVEL P



SEA LEVEL PRESSURE AND MEAN WIND

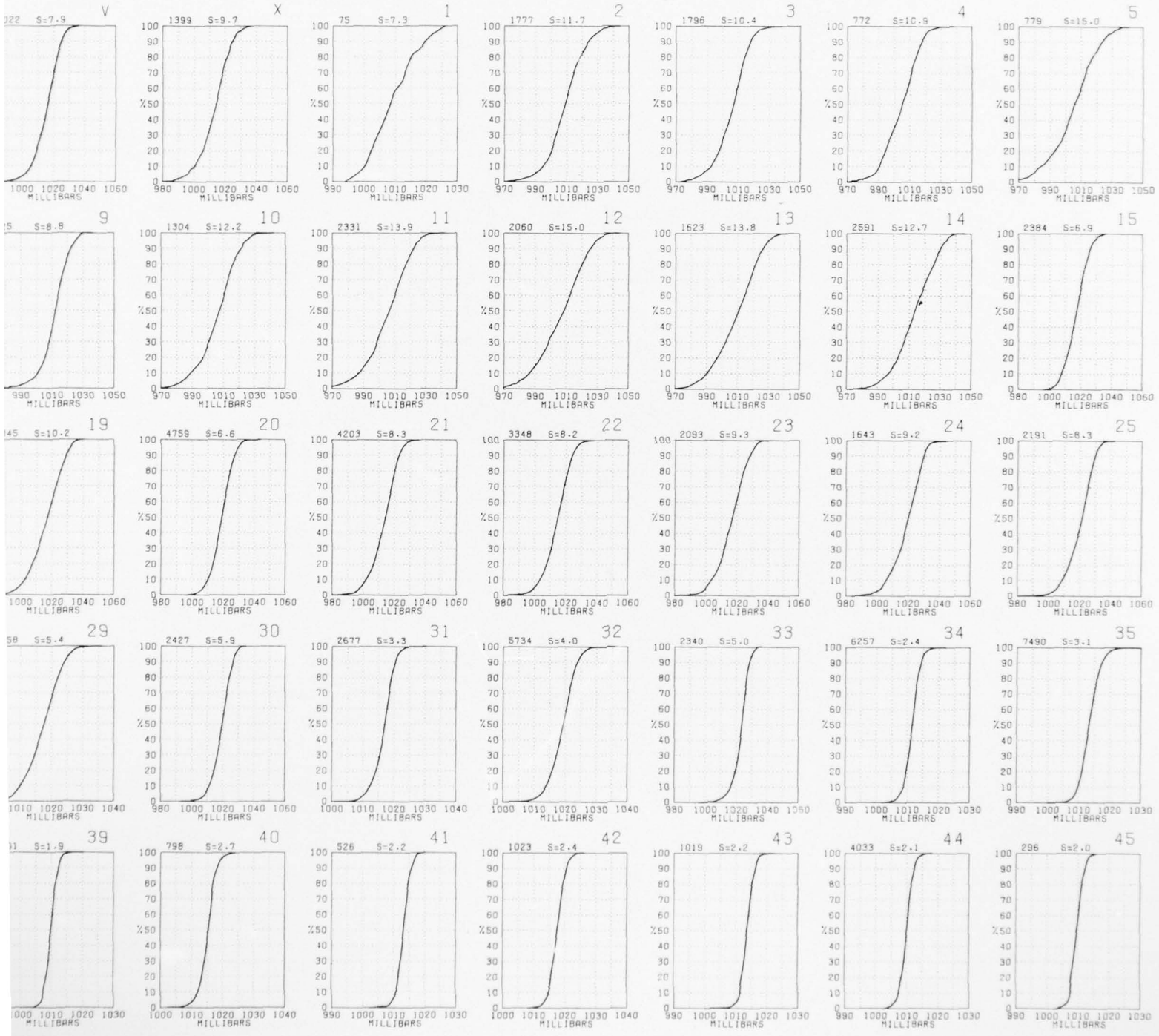


SEA LEVEL PRESSURE



Graphs represent the objective compilation of available data for specified areas without regard t
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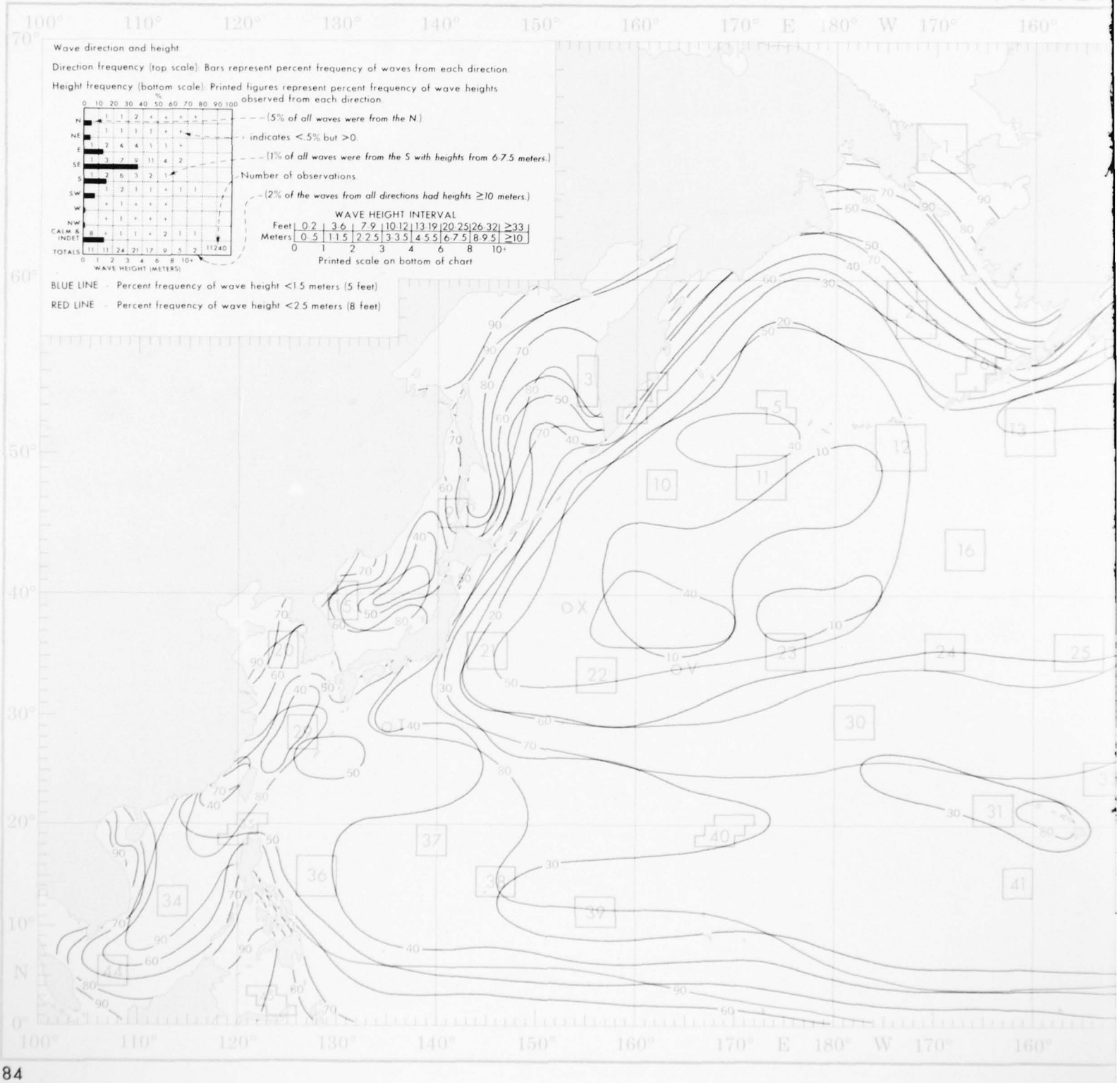
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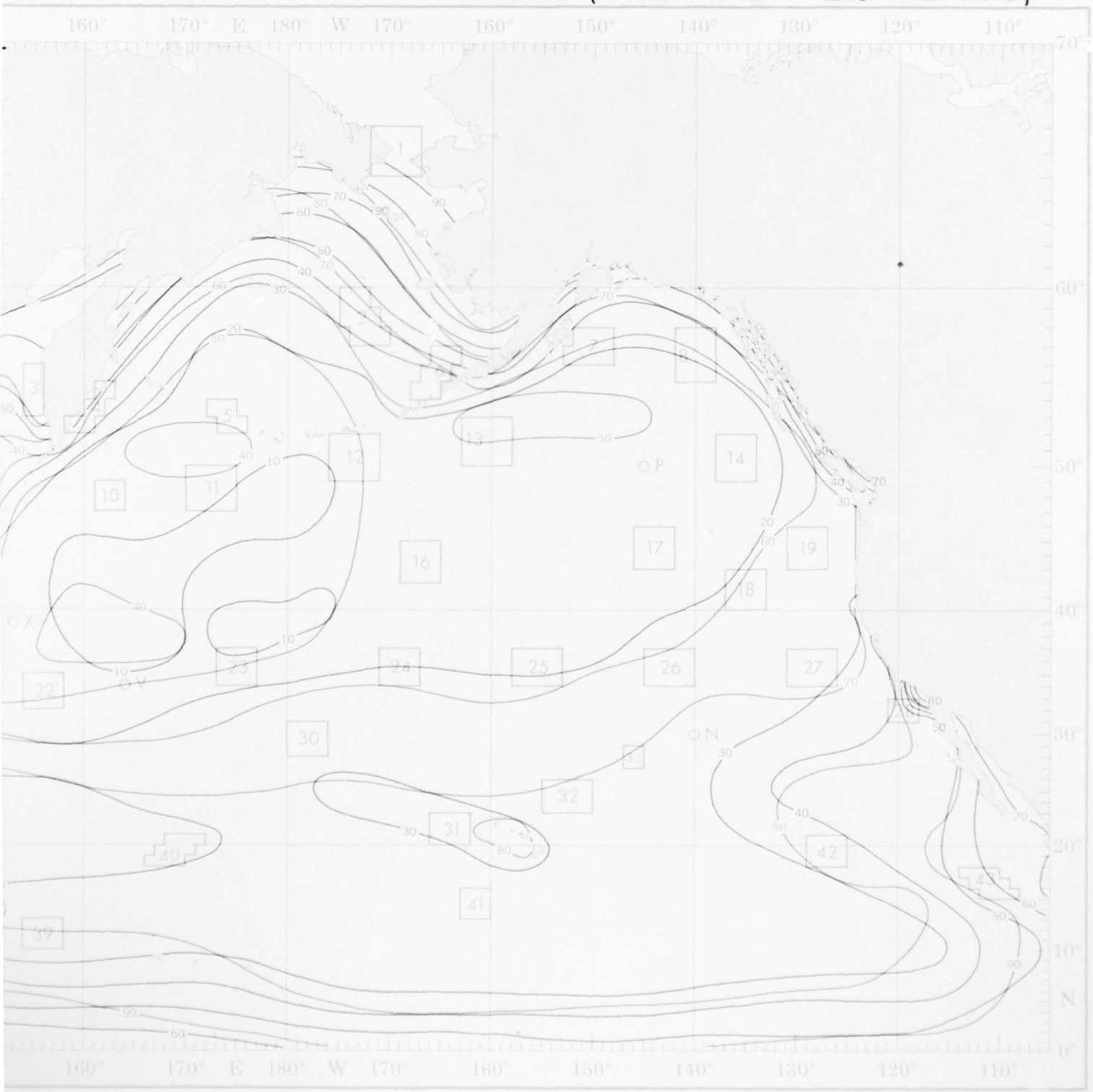
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lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MARCH

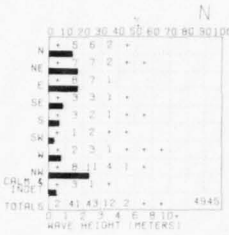
WAVES


Wave direction and height
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
+ indicates <.5% but >0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 3-6 7-9 10-12 13-19 20-25 26-32 ≥33
Meters 0-.5 1-1.5 2-2.5 3-3.5 4-5.5 6-7.5 8-9.5 ≥10
0 1 2 3 4 6 8 10+
Printed scale on bottom of chart
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
N
NE
E
SE
S
SW
W
NW
CALM & INDET
TOTALS
WAVE HEIGHT (METERS)

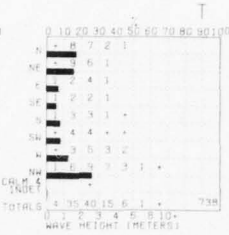
WAVES (<1.5 AND <2.5 METERS)

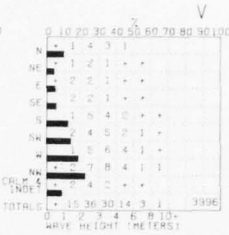


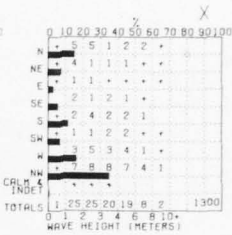
WAVE DIRECTION AND HEIGHT



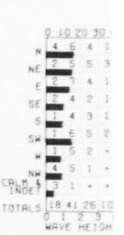


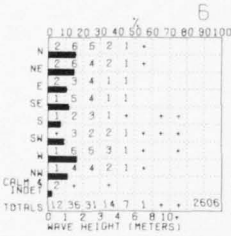


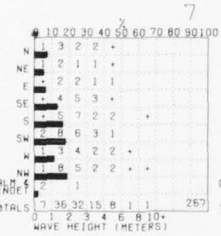


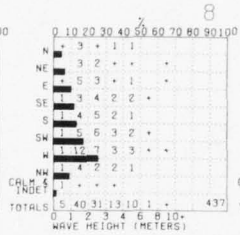


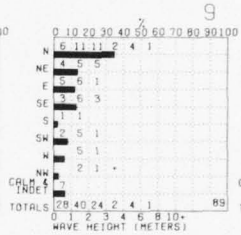
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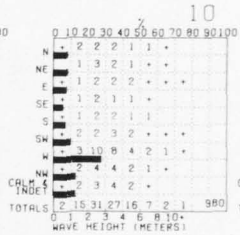


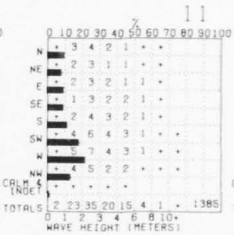


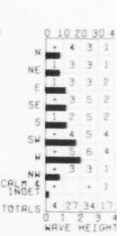


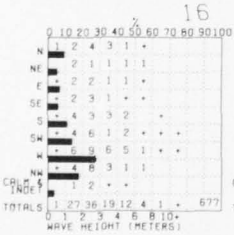


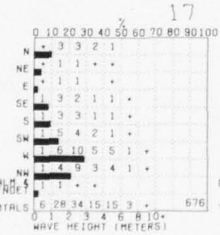


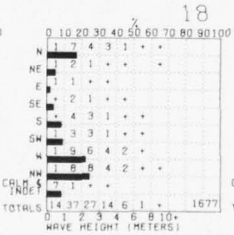


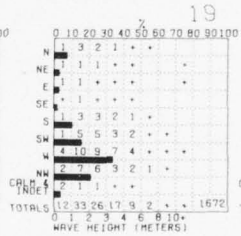


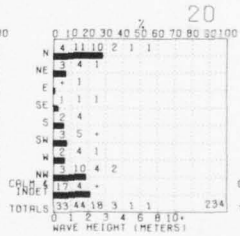


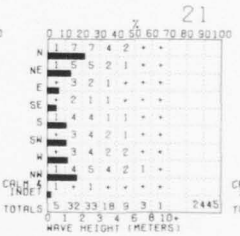


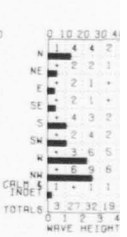


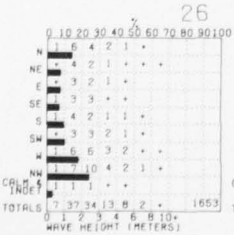


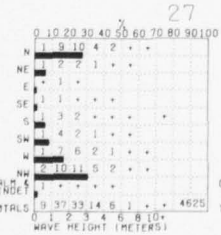


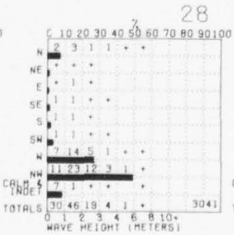


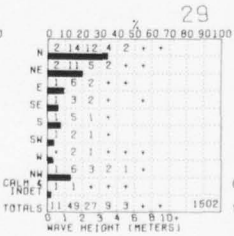


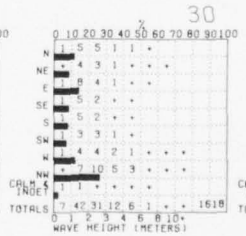


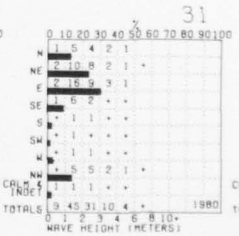


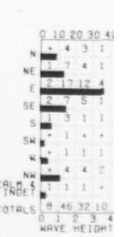


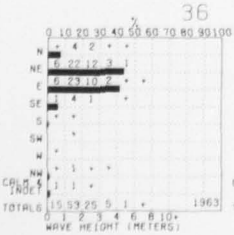


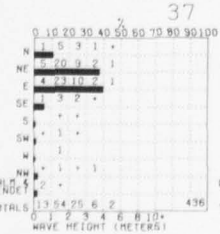


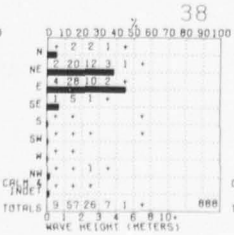


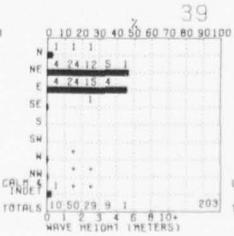


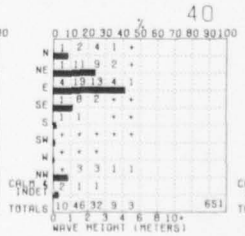


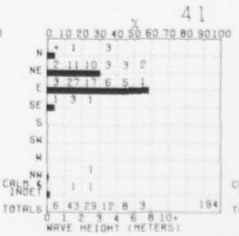










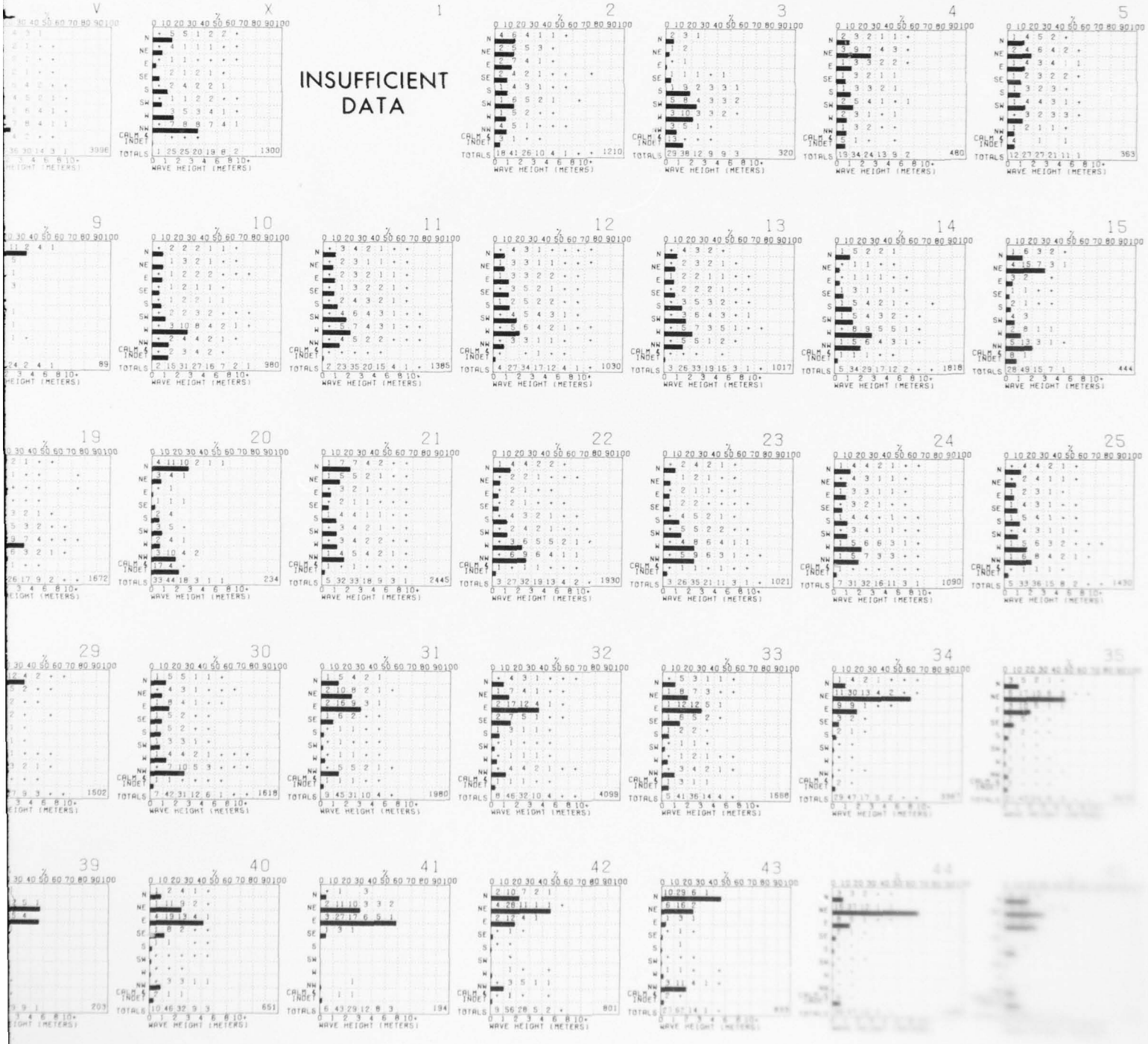




Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

IGHT

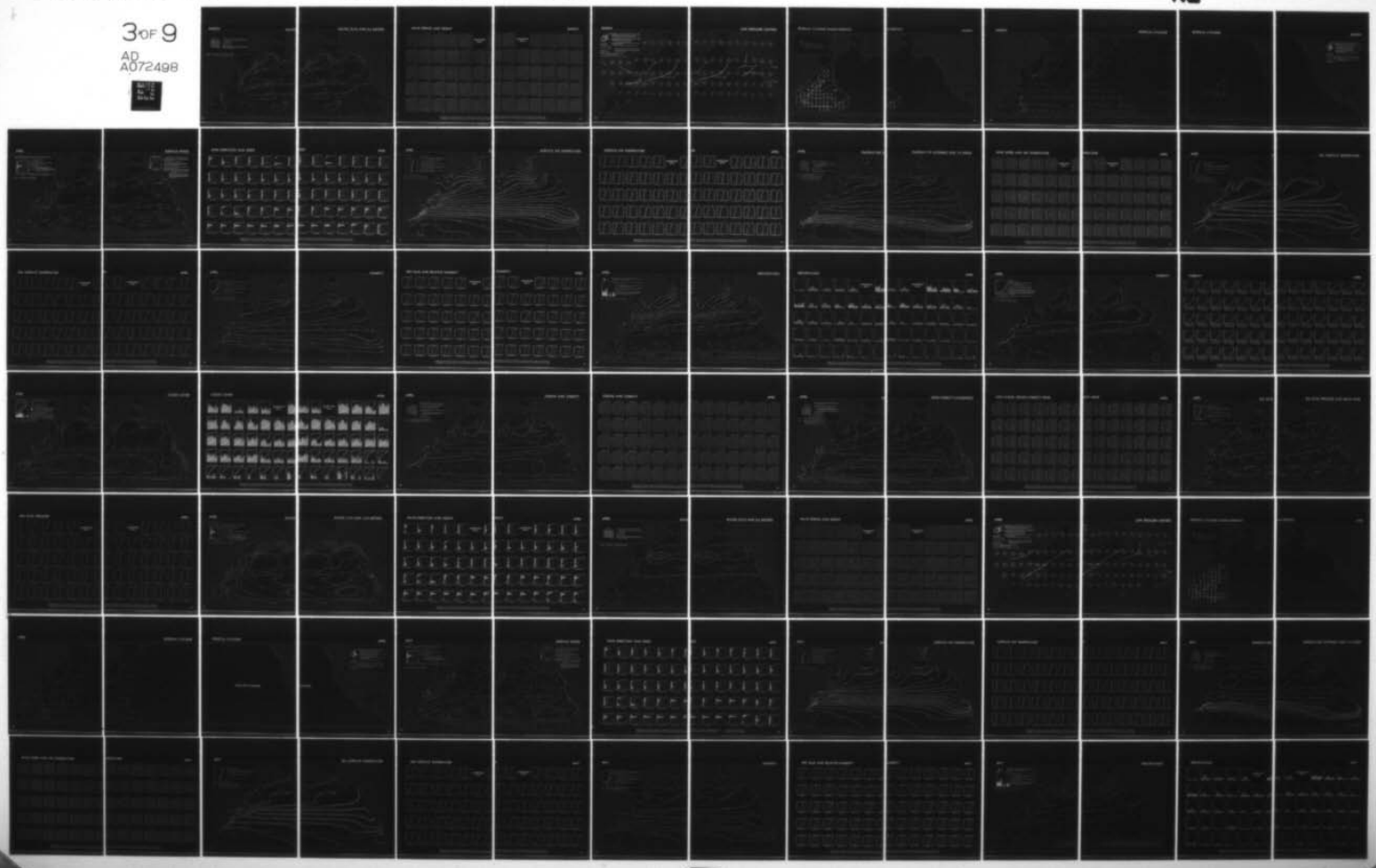
MARCH

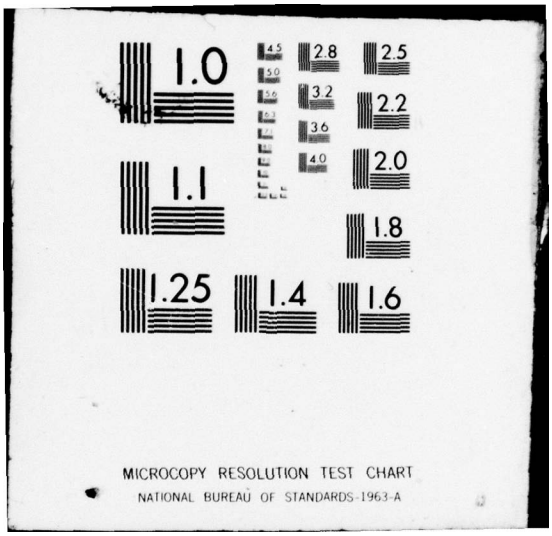


the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
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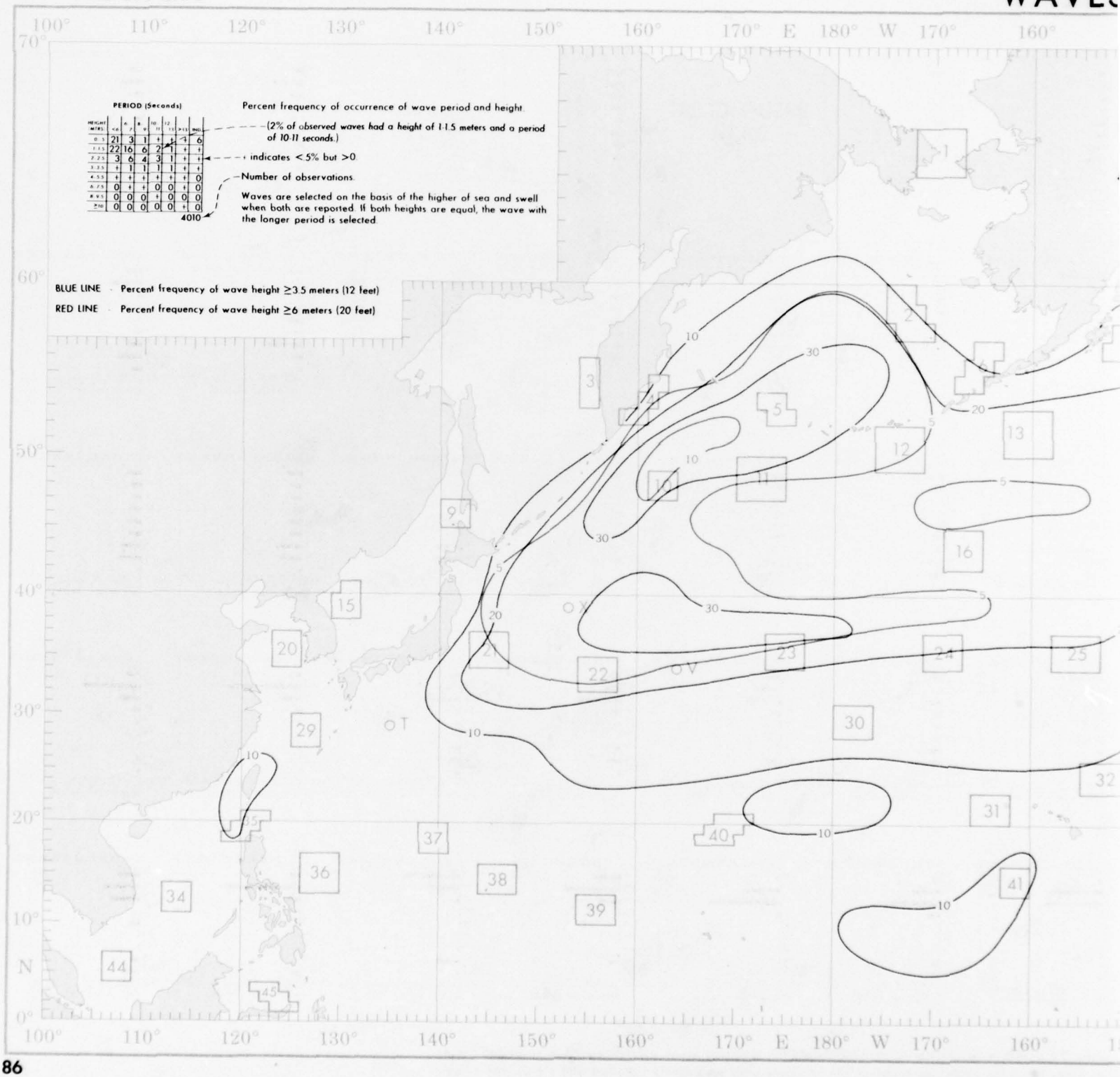
3 OF 9
AD
A072498




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

MARCH

WAVES


PERIOD (Seconds)
HEIGHT (METRS.)
<6
6-7
8-9
10-11
12-13
>13
INCL.
0-1.5
21
3
1
+
+
6
1.5-2.5
22
16
6
2
+
+
2.5-3.5
3
6
4
3
1
+
+
3.5-4.5
+
1
1
1
1
+
+
4.5-6.0
+
+
+
+
+
+
0
6.0-7.5
0
+
+
0
0
+
0
7.5-9.5
0
0
0
+
0
0
0
>10
0
0
0
0
0
+
0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100°
110°
120°
130°
140°
150°
160°
170° E
180° W
170°
160°
70°
60°
50°
40°
30°
20°
10°
N
0°
10
30
5
20
1
2
3
5
9
10
11
12
13
15
16
20
21
22
23
24
25
29
30
31
32
34
36
37
38
39
40
41
44
45

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	11	16	8	2	1	+	3
2-2.5	4	18	14	5	1	+	1
3-3.5	+	4	3	3	1	0	+
4-5.5	0	+	1	1	+	+	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

4553

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	0	0	0	1
1-1.5	5	6	4	1	1	+	+
2-2.5	2	14	11	4	2	1	+
3-3.5	+	5	8	4	3	1	+
4-5.5	+	3	8	3	3	1	+
6-7.5	0	1	2	1	1	+	0
8-9.5	0	+	+	1	+	+	0
≥10	0	0	+	+	0	0	0

3534

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	1	2	0	0	0	0
1-1.5	+	8	27	+	0	0	0
2-2.5	0	3	36	+	0	0	0
3-3.5	0	+	14	0	0	0	0
4-5.5	0	0	6	0	0	0	0
6-7.5	0	0	1	+	0	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

738

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	+	0	0	0	+
1-1.5	3	4	4	1	1	0	2
2-2.5	3	14	12	3	+	+	4
3-3.5	1	7	14	5	1	1	2
4-5.5	1	3	6	3	1	+	+
6-7.5	0	1	1	1	1	+	+
8-9.5	0	+	+	+	1	+	0
≥10	0	0	0	0	0	0	0

3997

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	+	+	0	0	0	1
1-1.5	0	1	15	1	0	0	8
2-2.5	+	1	16	1	+	+	6
3-3.5	+	2	15	2	0	0	1
4-5.5	+	4	11	3	+	0	0
6-7.5	0	2	4	2	0	+	0
8-9.5	0	+	1	2	0	+	0
≥10	0	0	0	0	0	0	0

1302

1

INSUFFICIENT DATA

HEIGHT (MTRS)	<6
0-.5	17
1-1.5	17
2-2.5	7
3-3.5	2
4-5.5	+
6-7.5	0
8-9.5	0
≥10	0

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	3
1-1.5	17	12	4	1	+	0	1
2-2.5	8	15	5	1	+	+	1
3-3.5	2	6	4	2	+	+	+
4-5.5	+	2	2	1	+	+	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	+	0	+	0
≥10	0	0	0	+	+	+	0

2672

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	+	0	0	0	0	2
1-1.5	15	10	4	1	2	+	3
2-2.5	13	8	4	2	+	1	3
3-3.5	3	6	3	1	+	1	1
4-5.5	+	1	3	2	+	+	1
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	+	+	0	0	0
≥10	0	0	0	0	0	0	0

271

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	1	+	0	0	1
1-1.5	19	10	4	2	3	+	2
2-2.5	7	12	4	4	1	1	+
3-3.5	3	3	3	2	1	+	+
4-5.5	1	2	4	1	+	+	+
6-7.5	0	0	+	1	0	0	0
8-9.5	0	0	+	0	0	+	0
≥10	0	0	0	0	0	0	0

441

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	0	0	0	0	0	39
1-1.5	11	2	0	0	0	0	19
2-2.5	6	3	0	0	0	0	10
3-3.5	0	0	0	0	0	0	2
4-5.5	1	3	0	0	0	0	0
6-7.5	0	1	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

114

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	0	0	0	0	1
1-1.5	4	5	3	+	1	0	2
2-2.5	1	10	11	3	2	+	3
3-3.5	1	5	11	5	1	1	4
4-5.5	+	2	6	4	1	1	2
6-7.5	0	+	3	2	1	+	+
8-9.5	0	0	1	0	1	0	0
≥10	0	0	0	+	0	1	+

983

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	+	0	0	+
1-1.5	6	10	4	1	+	0	1
2-2.5	4	8	13	7	2	1	1
3-3.5	1	3	6	5	4	1	+
4-5.5	1	2	5	4	2	1	+
6-7.5	0	+	1	1	1	1	0
8-9.5	0	0	0	0	1	+	0
≥10	0	0	0	+	0	+	0

1392

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	0	0	0	+
1-1.5	8	10	5	2	+	0	1
2-2.5	3	13	11	5	1	+	3
3-3.5	1	4	7	6	1	+	1
4-5.5	+	2	4	3	1	+	1
6-7.5	0	+	1	1	1	0	+
8-9.5	0	+	0	+	+	+	0
≥10	0	0	+	+	0	0	0

681

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	0	0	0	2
1-1.5	9	13	4	+	1	0	1
2-2.5	6	11	9	6	1	1	+
3-3.5	1	5	3	4	1	1	+
4-5.5	1	1	5	5	2	1	1
6-7.5	0	+	1	1	+	+	0
8-9.5	0	0	+	0	0	+	0
≥10	0	0	0	0	0	0	0

681

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	7
1-1.5	12	16	6	1	+	+	1
2-2.5	3	10	9	3	1	+	1
3-3.5	+	4	4	2	2	1	+
4-5.5	+	1	2	2	1	1	+
6-7.5	0	+	+	+	+	0	0
8-9.5	0	+	+	+	0	0	0
≥10	0	0	0	0	0	0	0

1699

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	2
1-1.5	16	8	5	1	+	+	1
2-2.5	6	10	6	3	1	+	1
3-3.5	2	7	4	3	1	+	+
4-5.5	1	4	2	2	1	1	+
6-7.5	0	+	1	+	+	+	+
8-9.5	0	0	0	+	0	0	0
≥10	0	0	+	+	0	+	0

1680

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	0	+	0	0	17
1-1.5	22	11	2	+	+	0	5
2-2.5	3	5	4	2	1	+	1
3-3.5	+	1	1	0	+	+	0
4-5.5	0	0	0	0	0	0	1
6-7.5	0	0	0	0	0	0	1
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

246

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	13	12	4	1	1	+	1
2-2.5	4	11	11	4	+	+	1
3-3.5	1	5	5	4	2	1	+
4-5.5	+	2	2	3	1	1	+
6-7.5	0	+	1	1	1	+	-
8-9.5	+	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

2467

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	1
1-1.5	15	11	6	1	1	1	2
2-2.5	4	11	11	3	2	+	2
3-3.5	1	2	4	3	1	1	1
4-5.5	+	1	2	2	1	+	1
6-7.5	0	+	+	1	+	+	+
8-9.5	0	+	0	+	+	+	0
≥10	0	0	0	0	0	0	0

1678

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	15	13	5	1	1	+	1
2-2.5	6	11	10	4	1	1	1
3-3.5	1	4	4	3	1	+	+
4-5.5	+	1	2	1	+	1	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	+	+	0	0
≥10	0	0	0	0	0	+	0

4710

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	3	1	+	0	0	7
1-1.5	26	12	4	1	1	+	1
2-2.5	5	6	5	1	+	+	+
3-3.5	1	1	1	1	+	+	+
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	+	0	+	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3095

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	1
1-1.5	21	20	4	1	+	+	1
2-2.5	4	8	11	3	+	+	+
3-3.5	1	2	3	1	1	+	+
4-5.5	1	+	1	1	+	0	0
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	+	0

1520

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	+	1	0	0	1
1-1.5	16	12	7	2	2	1	2
2-2.5	5	11	8	4	2	1	1
3-3.5	1	2	4	3	1	1	+
4-5.5	0	1	2	2	1	+	+
6-7.5	0	0	+	+	+	+	+
8-9.5	0	0	0	+	+	+	0
≥10	0	0	+	+	0	0	0

1637

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	19	15	6	2	1	+	1
2-2.5	7	10	8	3	1	1	1
3-3.5	1	2	4	2	1	+	+
4-5.5	+	1	1	+	+	+	+
6-7.5	0	+	0	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2002

36

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	2	1	+	0	0	1
1-1.5	22	22	6	2	+	+	+
2-2.5	2	9	9	3	1	+	+
3-3.5	+	1	1	1	1	+	0
4-5.5	+	+	+	1	+	+	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1995

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	2	+	1	0	0	2
1-1.5	24	18	7	1	1	+	2
2-2.5	6	6	8	2	1	+	+
3-3.5	+	3	+	+	1	+	+
4-5.5	0	+	1	0	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

447

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	2	1	+	0	0	1
1-1.5	26	18	8	3	1	+	+
2-2.5	5	10	6	3	1	1	+
3-3.5	+	2	2	1	+	+	0
4-5.5	0	1	0	+	1	0	0
6-7.5	0	0	0	0	0	+	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

896

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	+	0	0	0	0	1
1-1.5	26	14	5	1	1	+	+
2-2.5	9	8	10	1	0	0	+
3-3.5	1	1	2	2	1	+	0
4-5.5	0	1	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

207

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	22	11	7	2	2	+	1
2-2.5	6	12	7	3	1	1	1
3-3.5	1	3	2	1	+	0	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

662

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	2	1	0	0	0	1
1-1.5	14	24	3	1	1	0	1
2-2.5	4	12	8	2	1	0	3
3-3.5	3	4	3	1	1	1	0
4-5.5	1	1	5	1	0	0	0
6-7.5	0	1	2	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

195

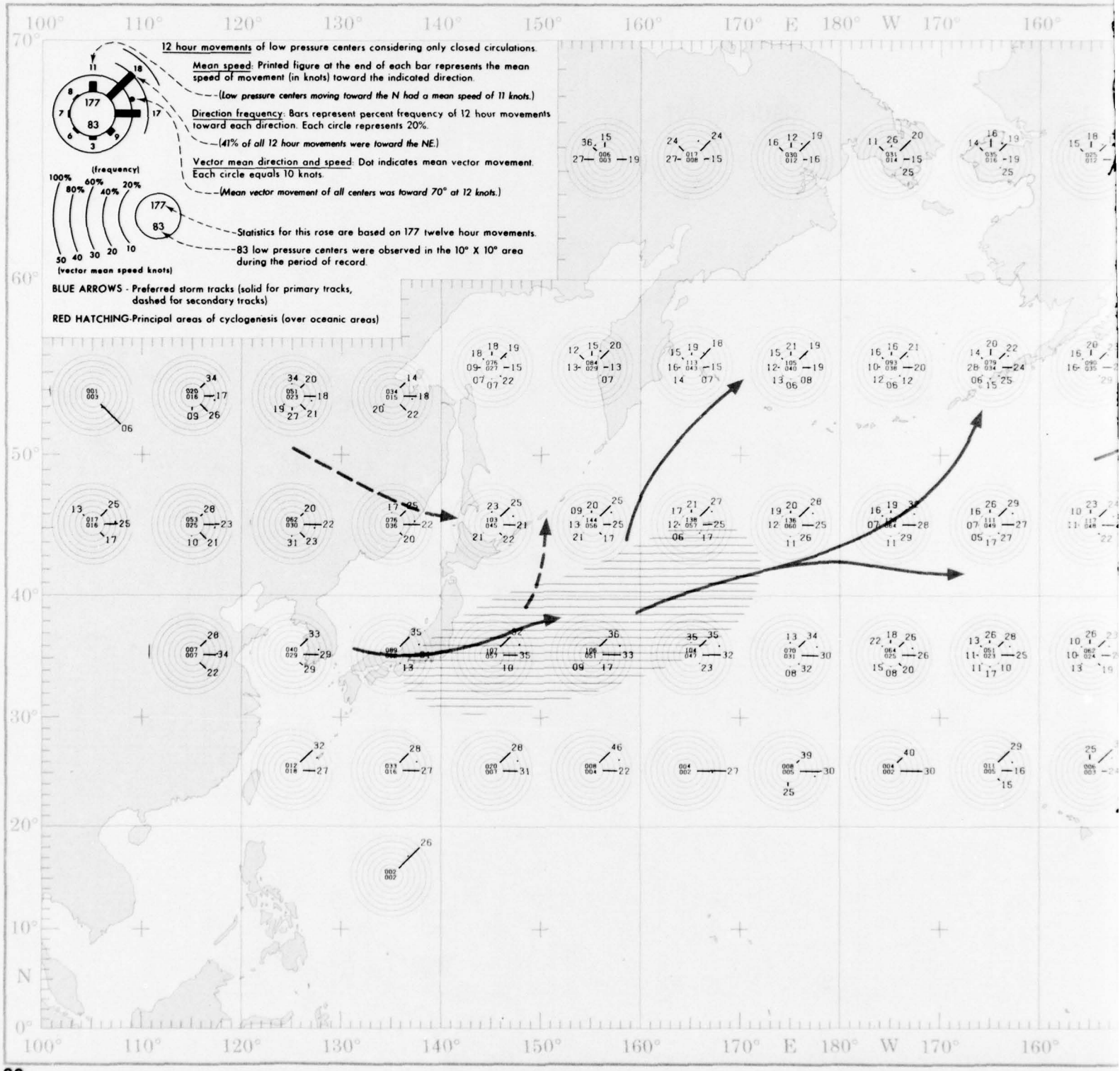
Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

MARCH

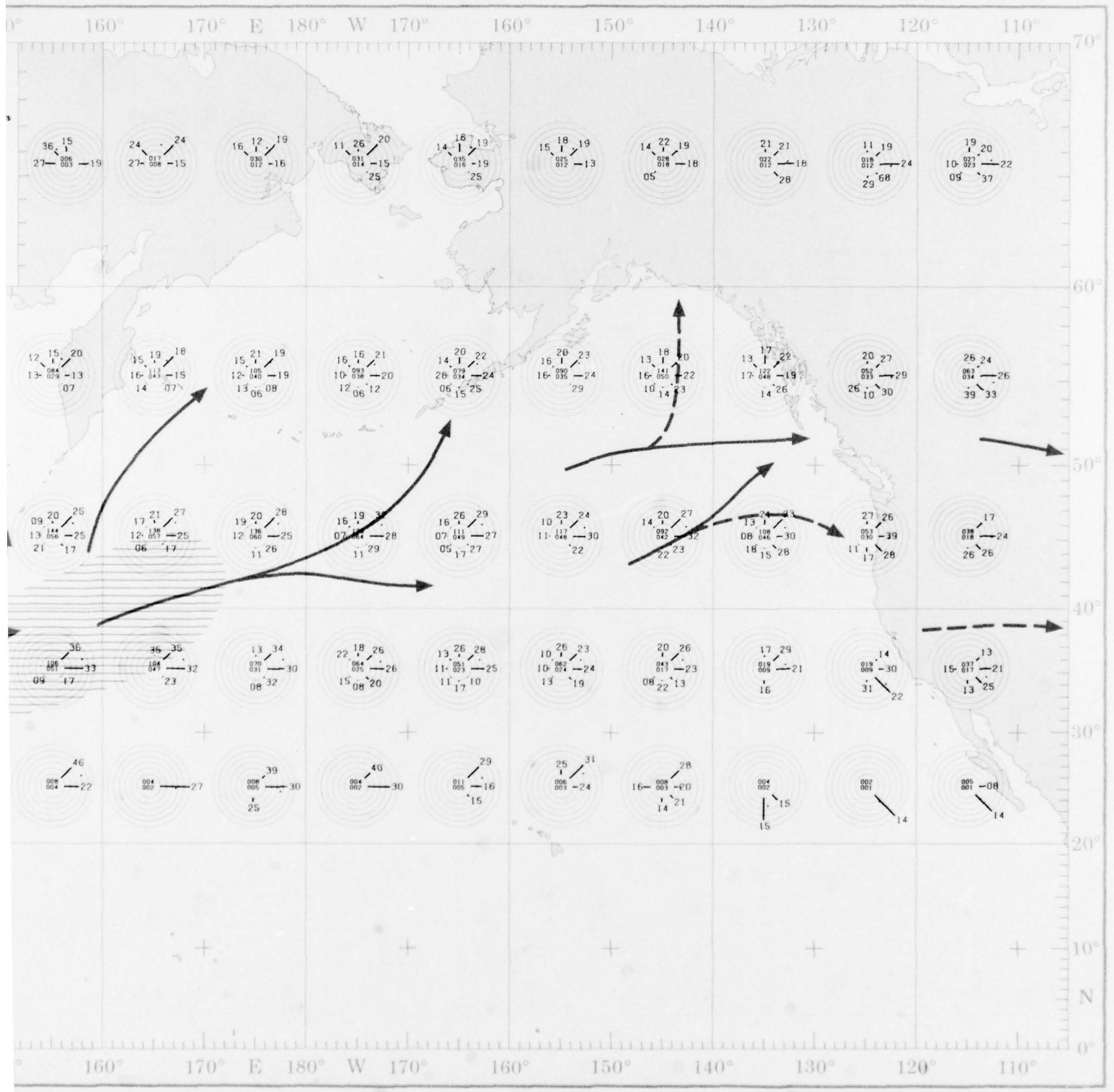
INSUFFICIENT DATA

e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

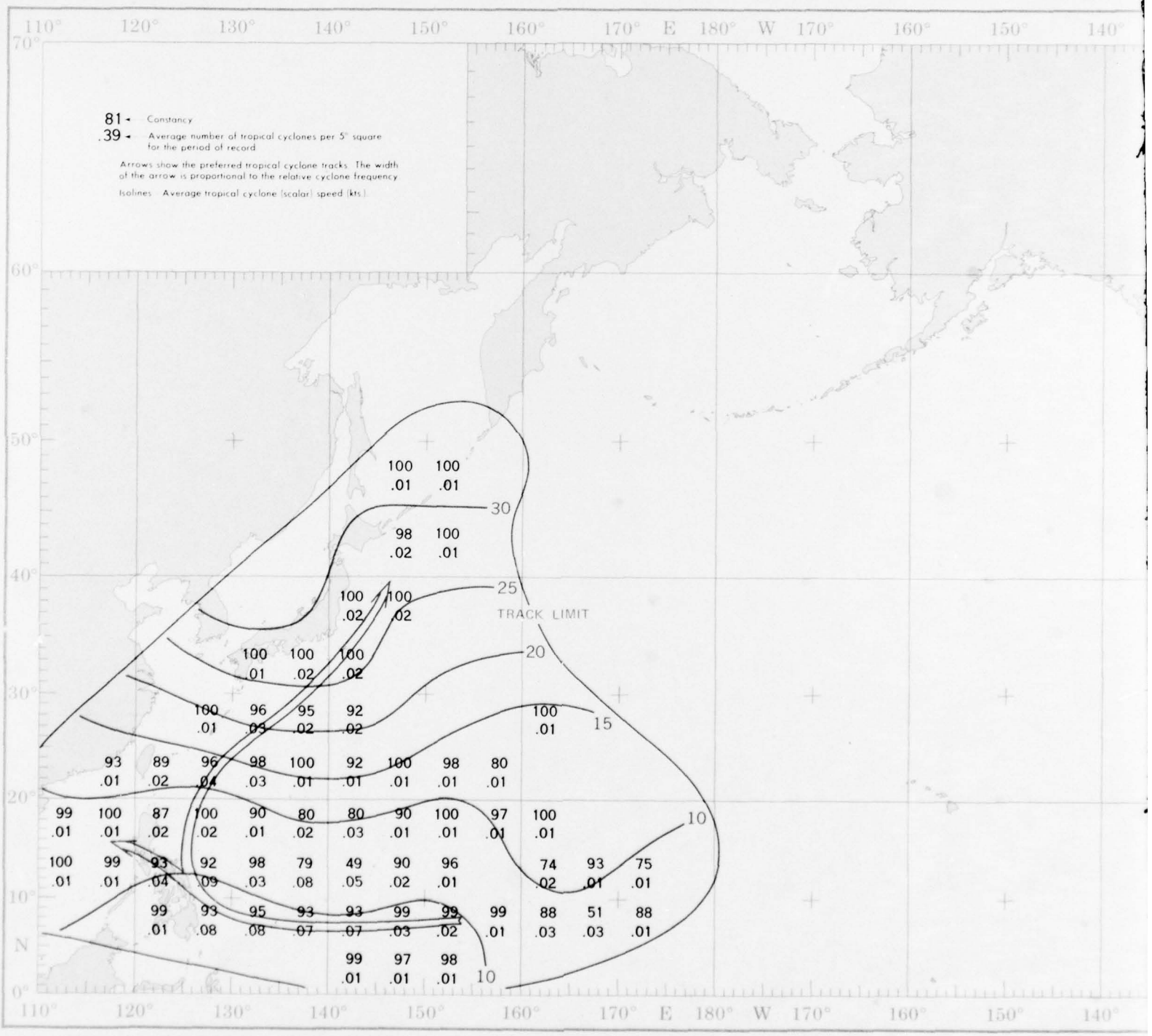
MARCH

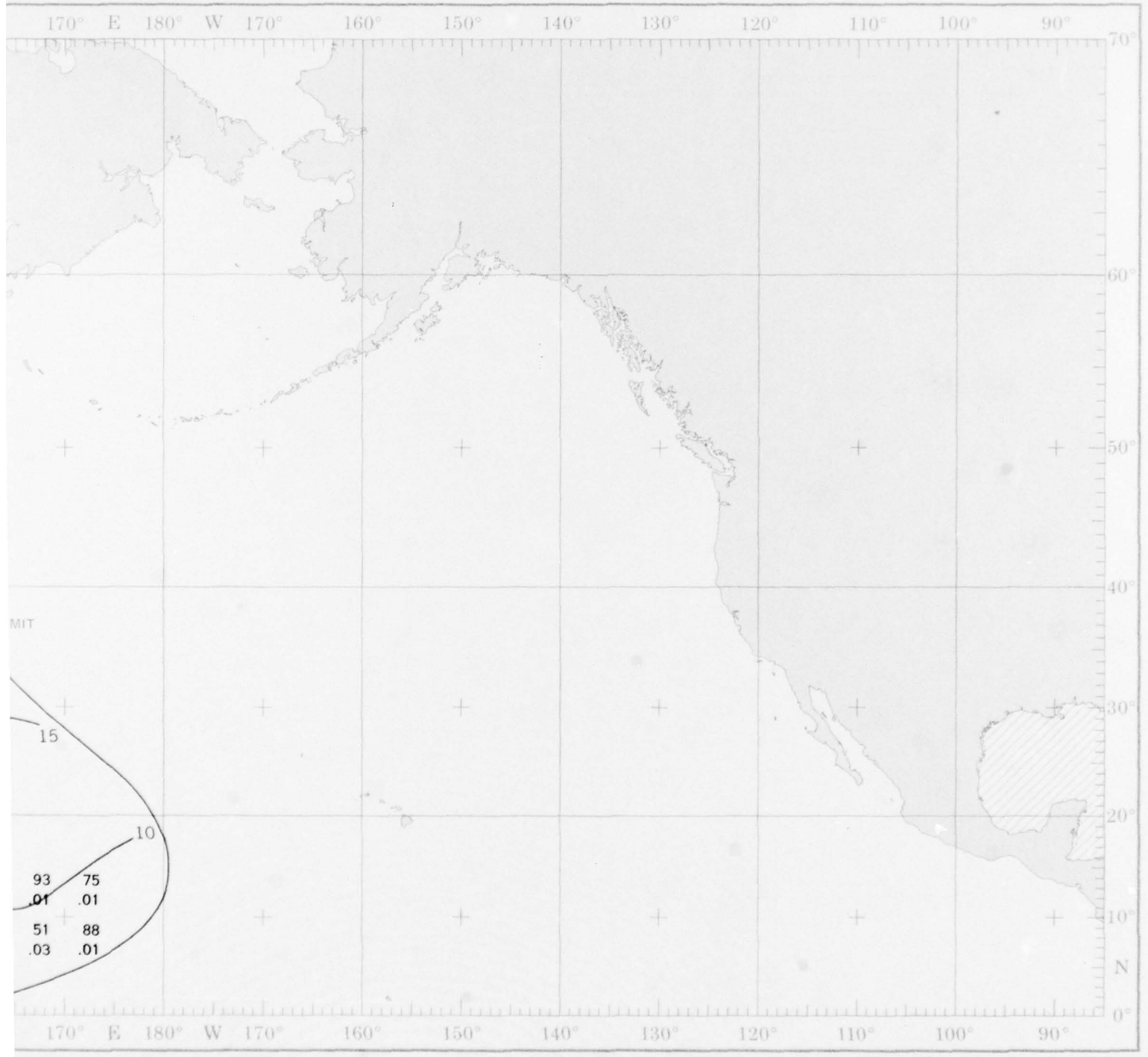

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

LOW PRESSURE CENTERS

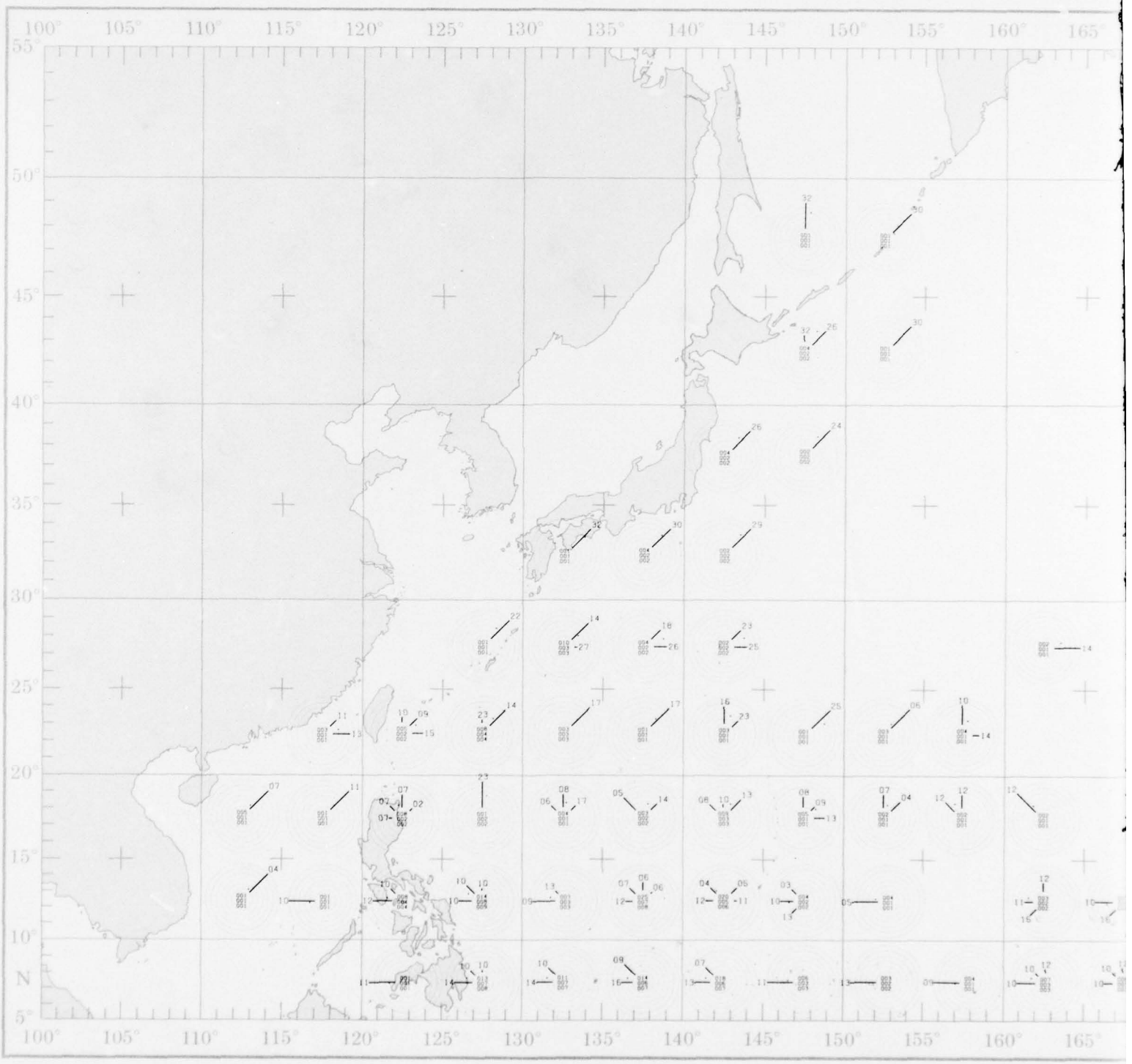


TROPICAL CYCLONE CHARACTERISTICS

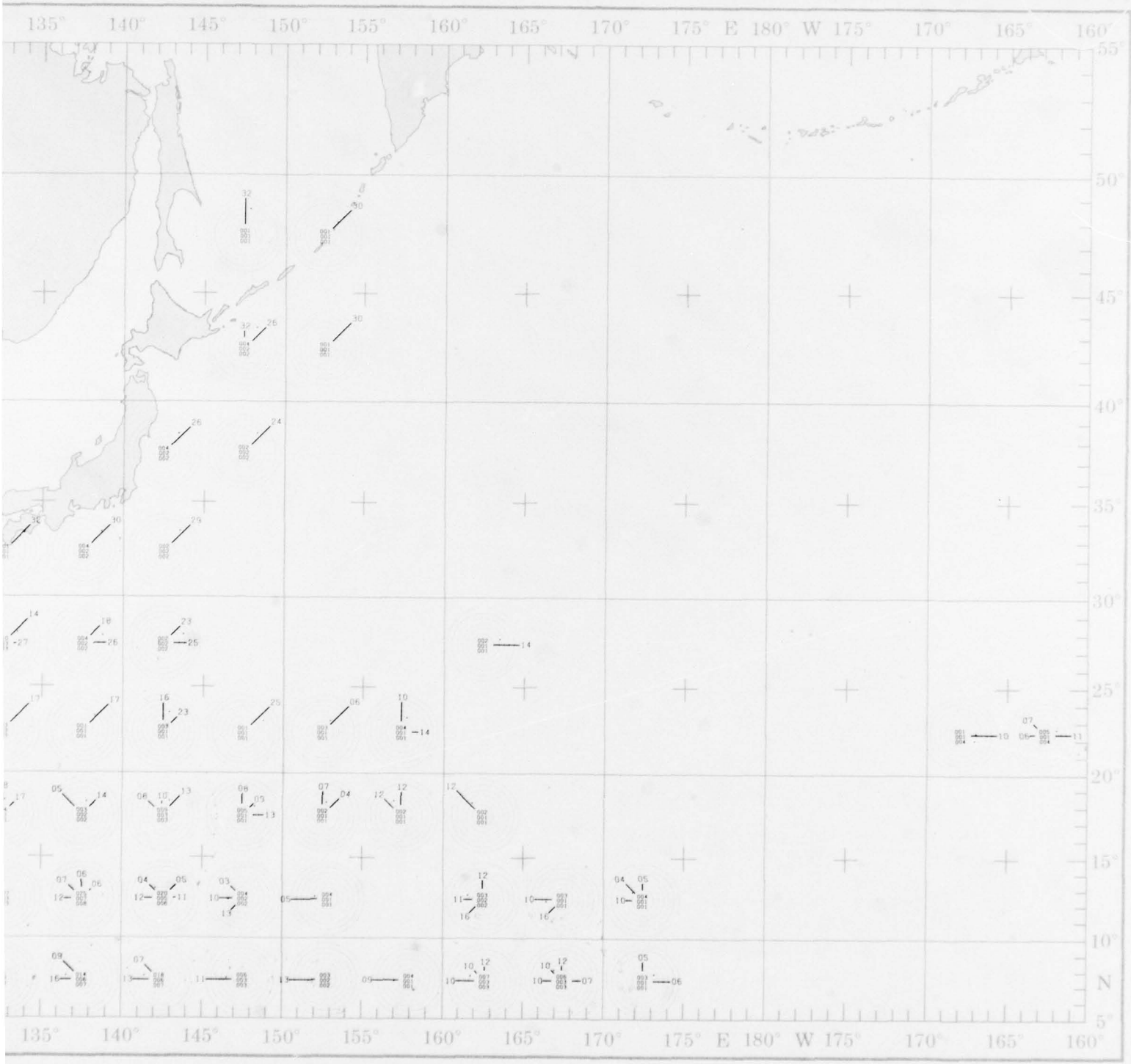



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
MIT
15
10
93 75
.01 .01
51 88
.03 .01

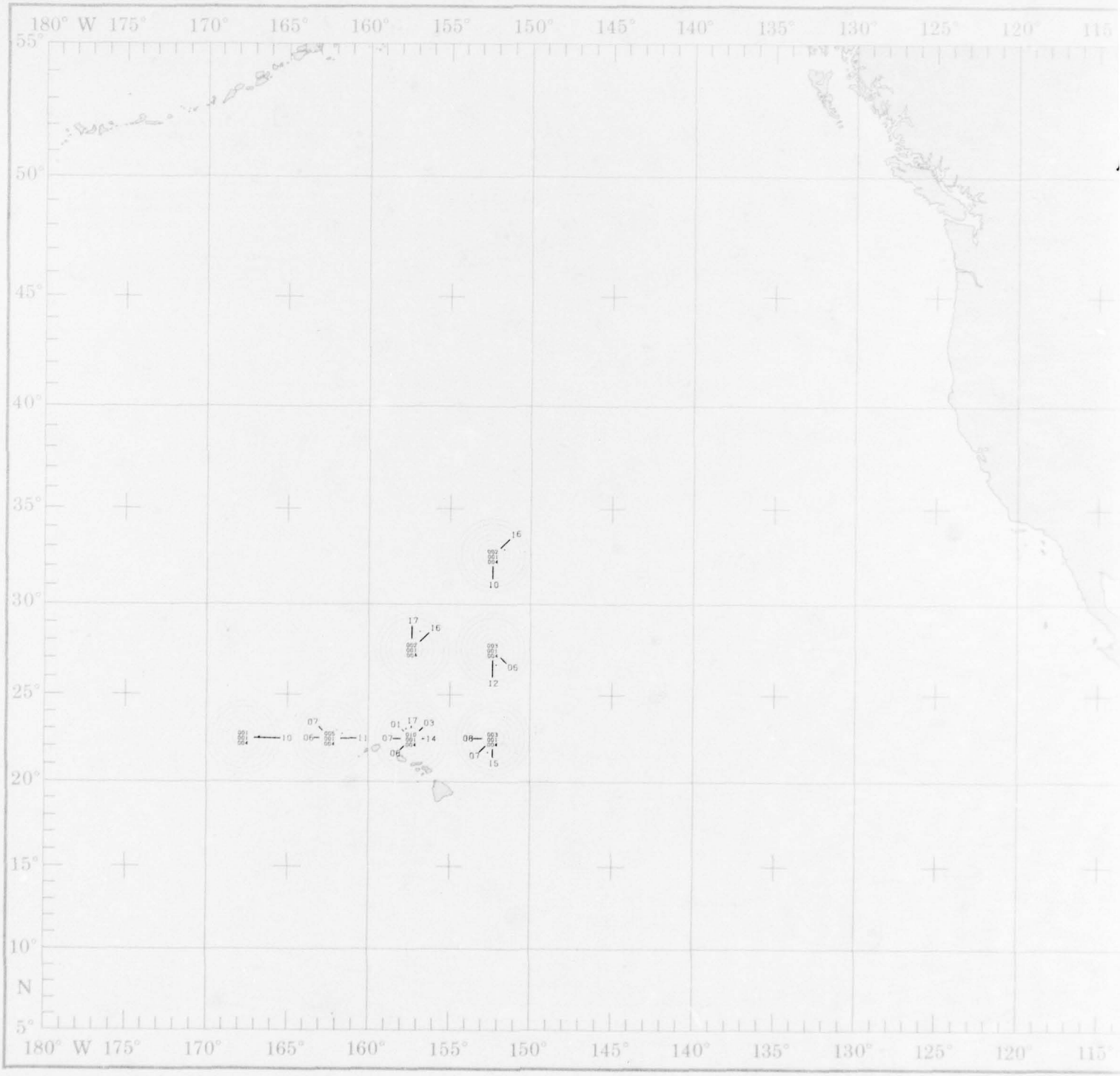
MARCH


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
N
5°

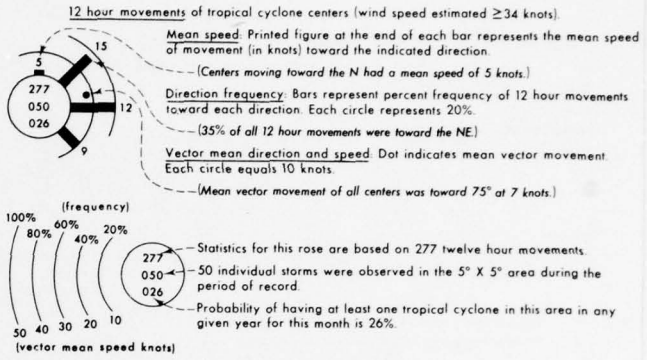
TROPICAL CYCLONE



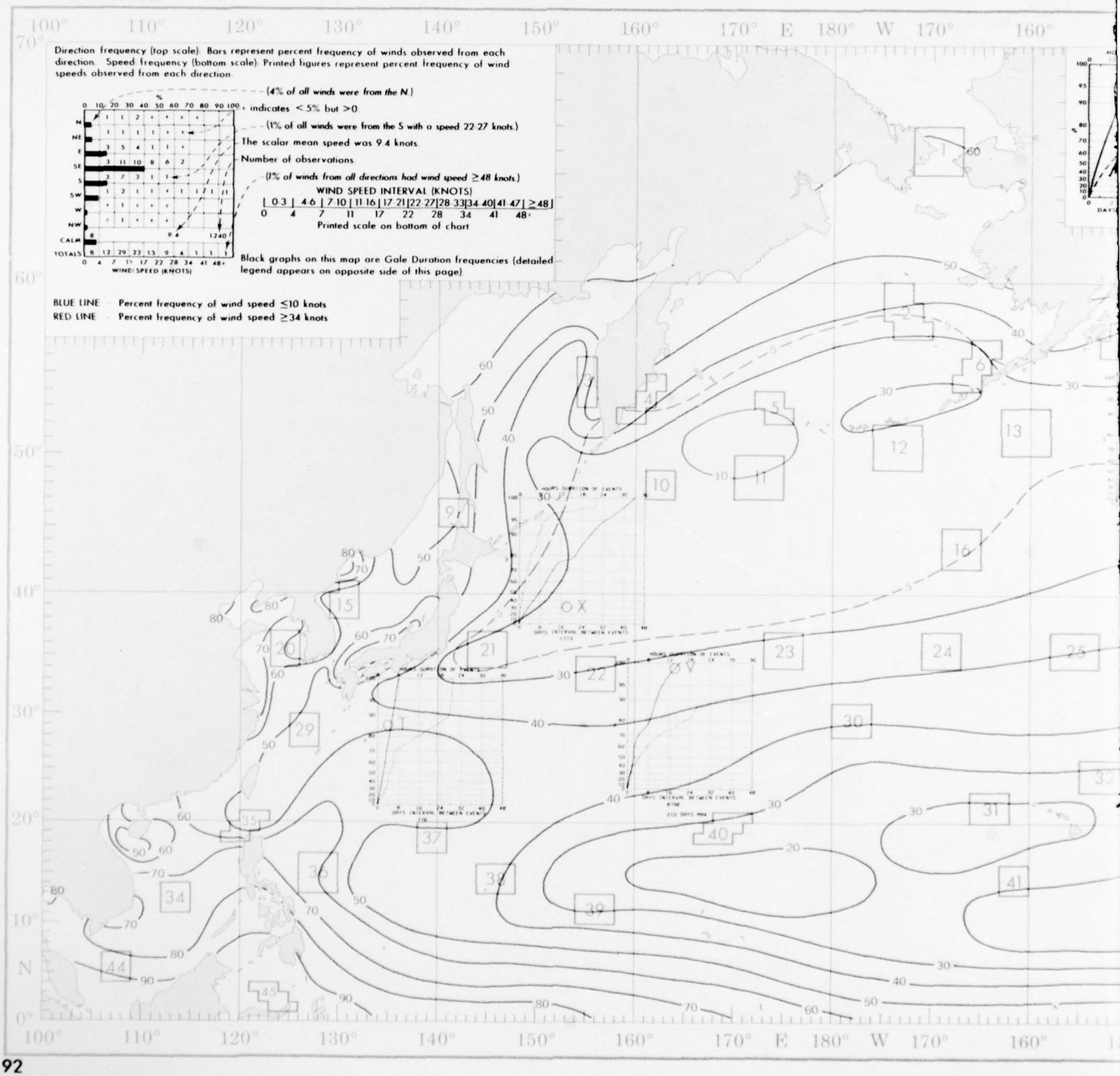
TROPICAL CYCLONE



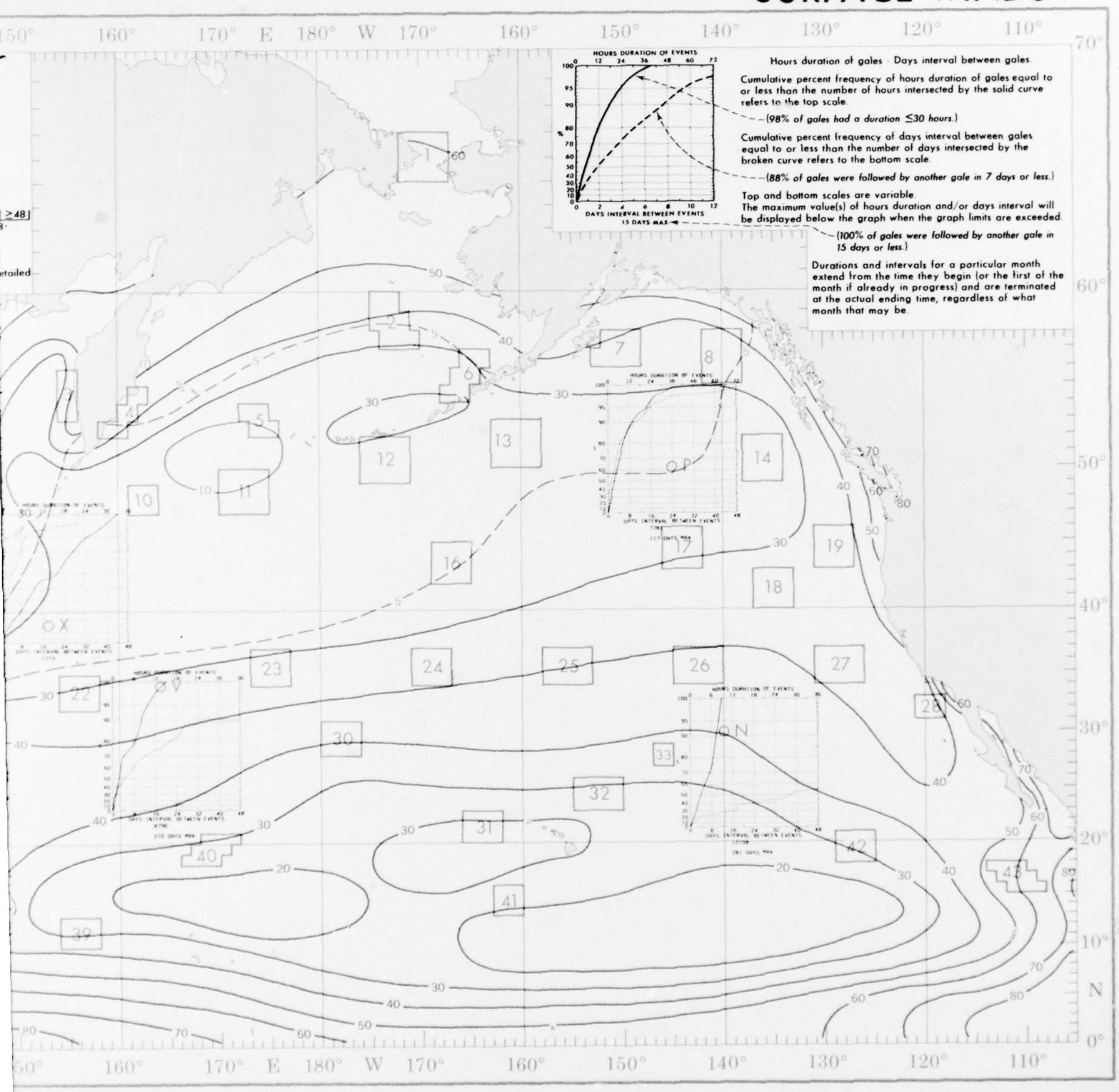
MARCH


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

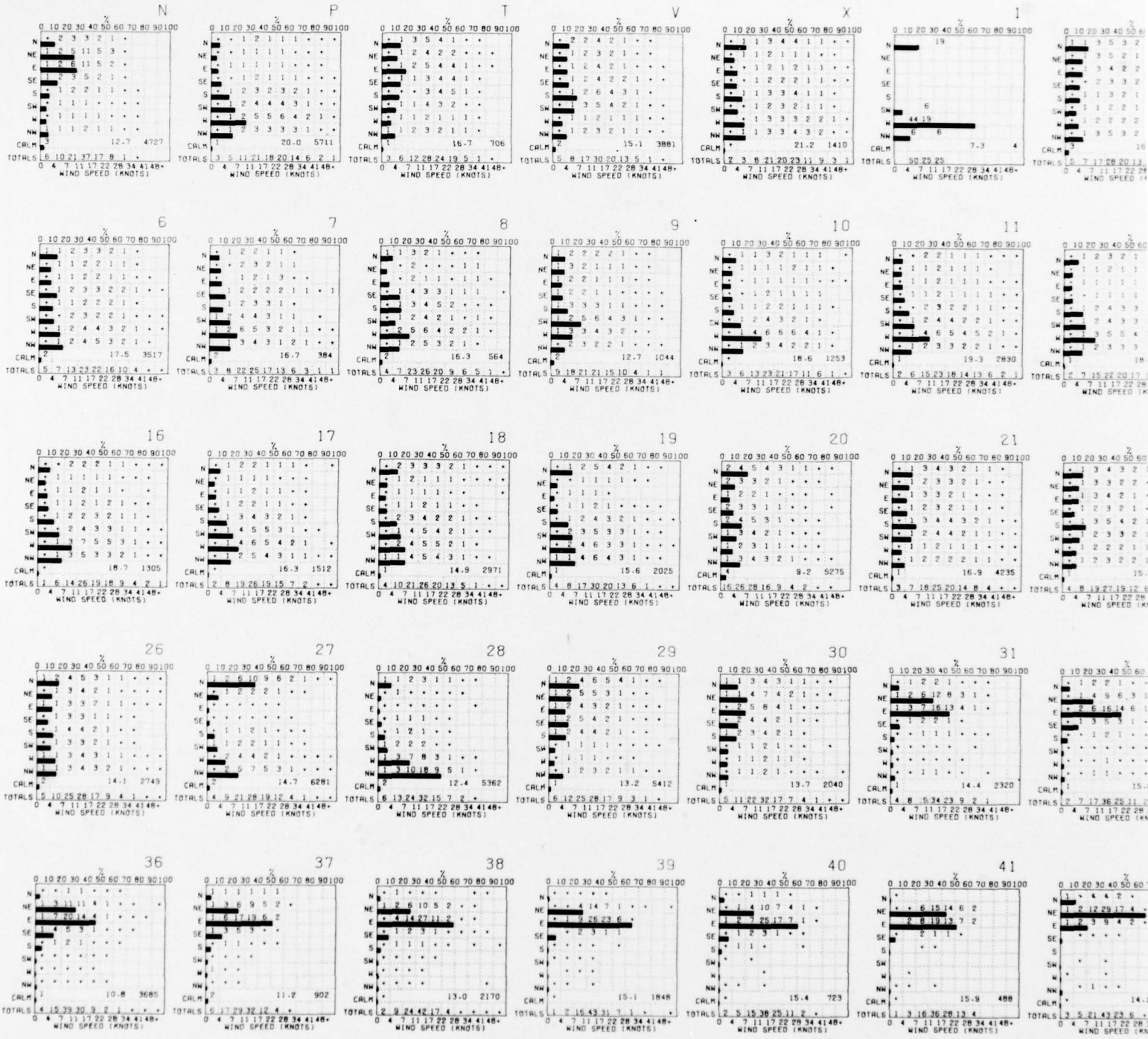
APRIL


Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
+ indicates < 5% but >0
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
| 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48 |
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE — Percent frequency of wind speed ≤10 knots
RED LINE — Percent frequency of wind speed ≥34 knots
N
NE
E
SE
S
SW
W
NW
CALM
TOTALS
WIND SPEED (KNOTS)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

SURFACE WINDS



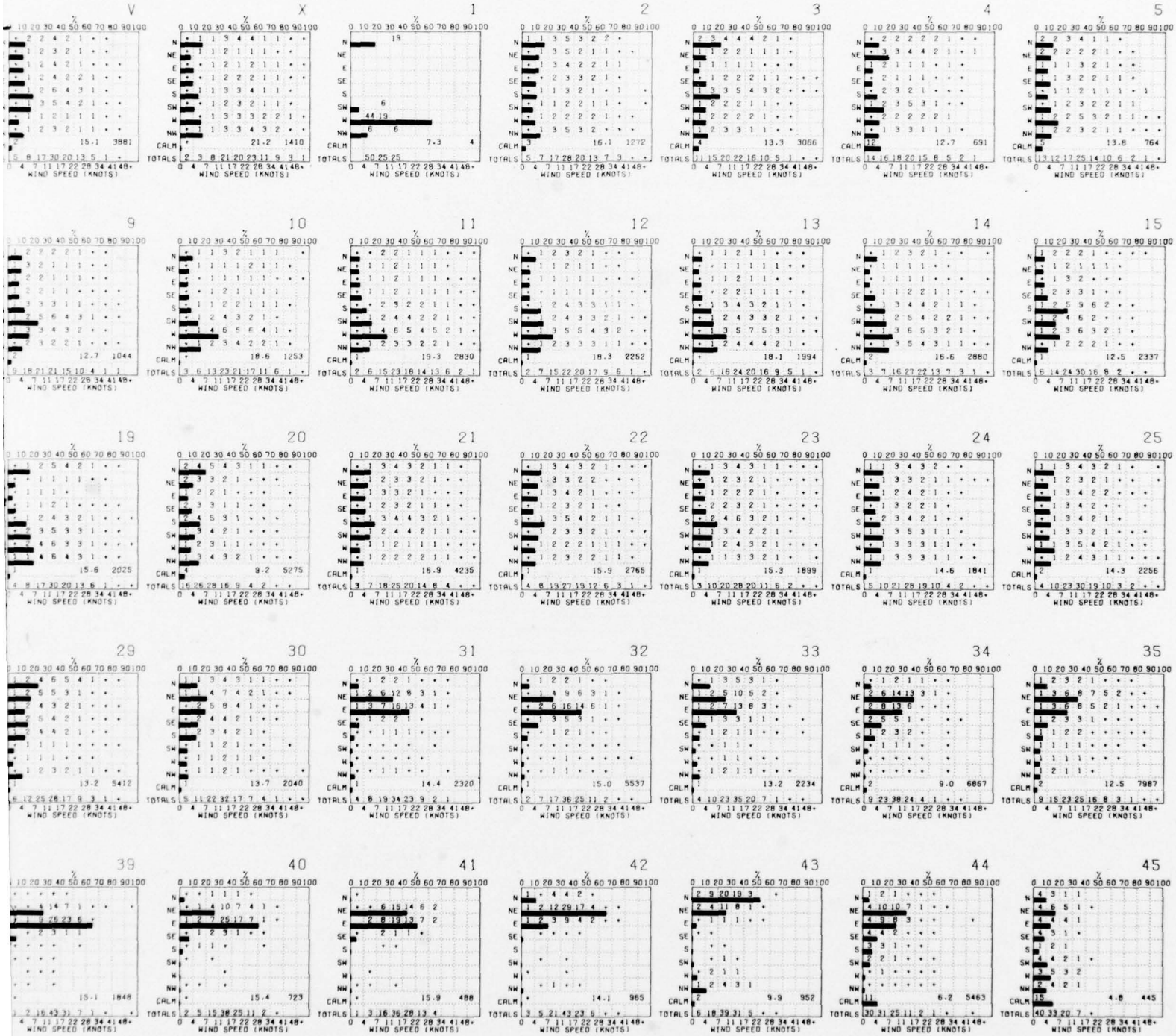
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

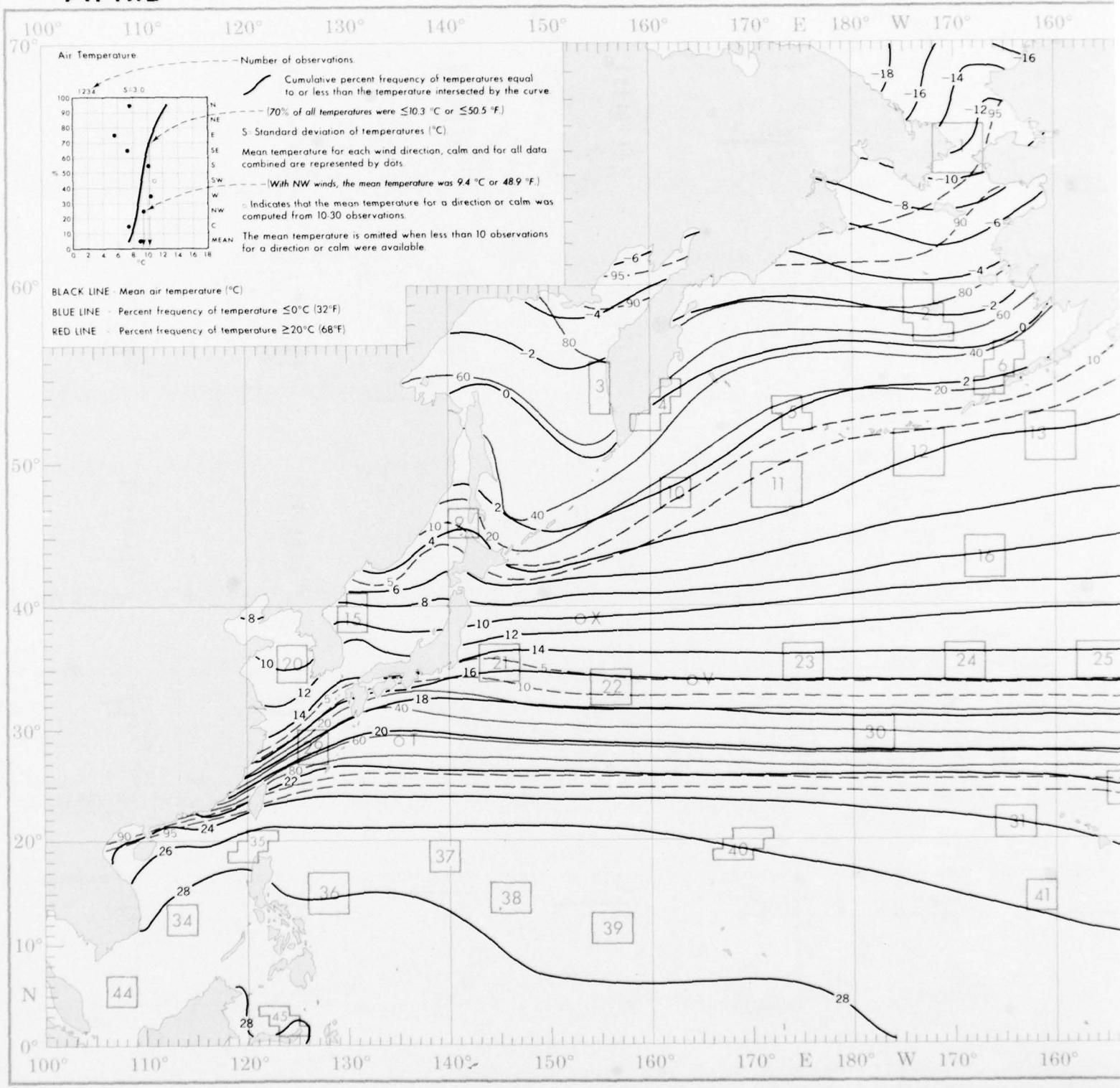
PEED

APRIL

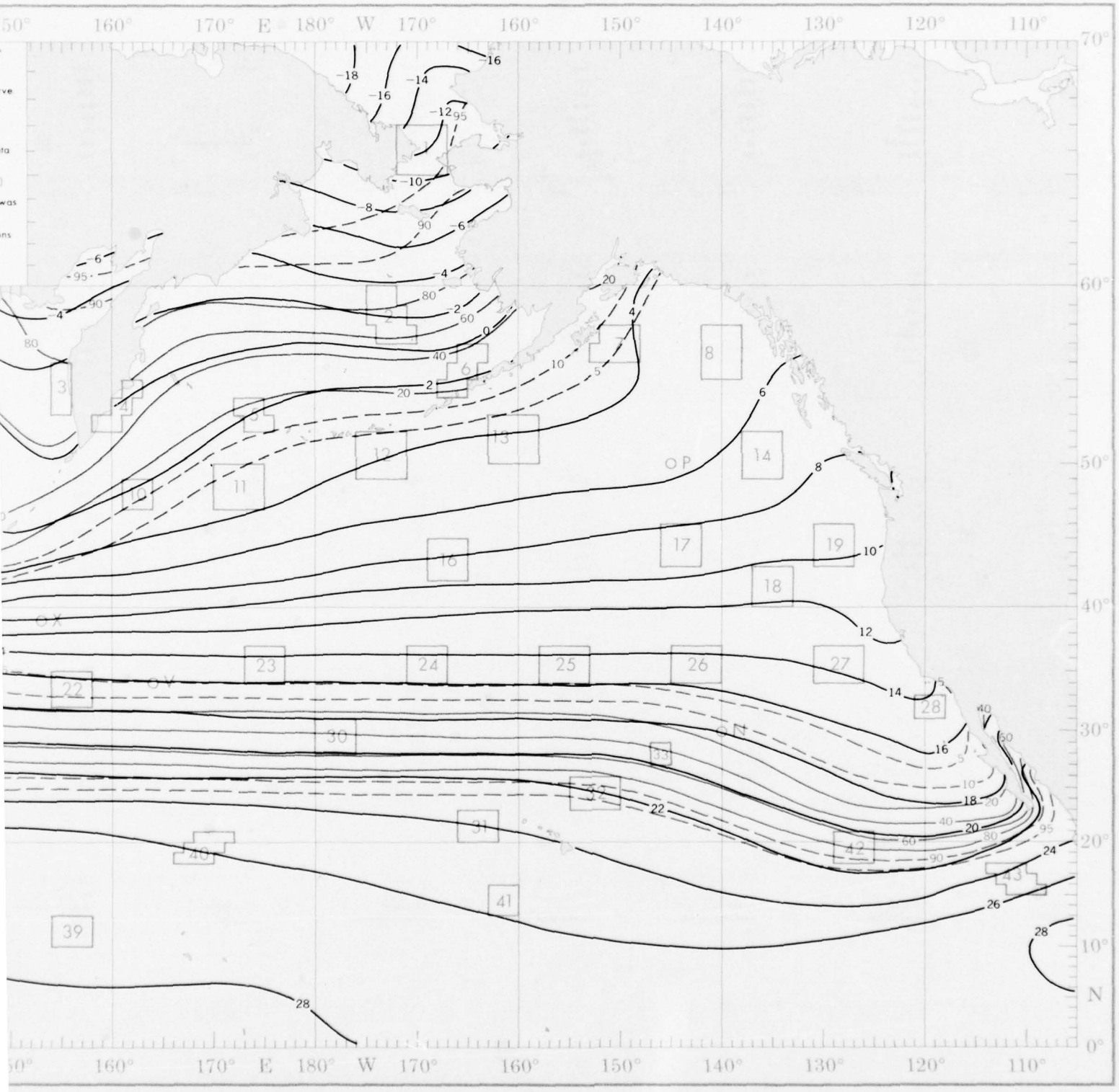


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nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

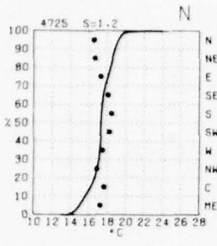
APRIL

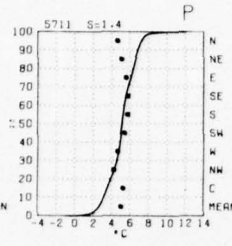

Air Temperature
Number of observations
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S- Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
°C
100°
110°
120°
130°
140°
150°
160°
170° E
180° W
170°
160°
70°
60°
50°
40°
30°
20°
10°
N
0°

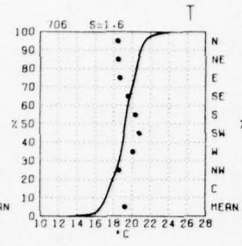
SURFACE AIR TEMPERATURE

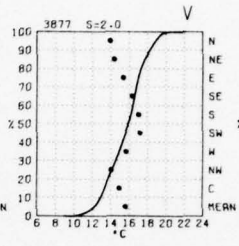


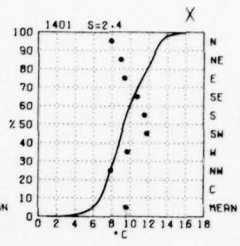
SURFACE AIR TEMPERATURE



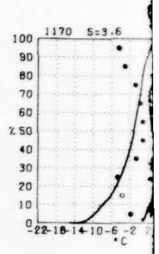


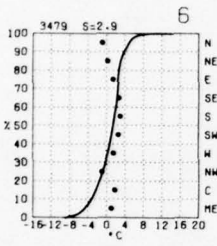


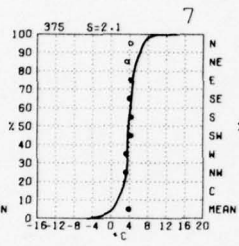


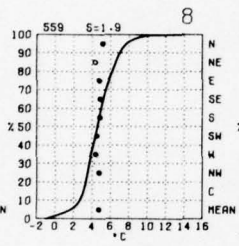


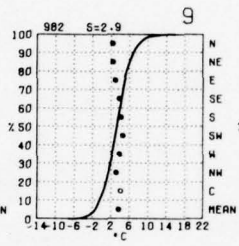
INSUFFICIENT DATA

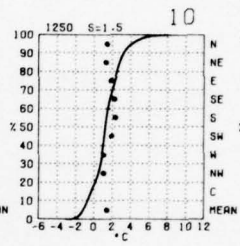


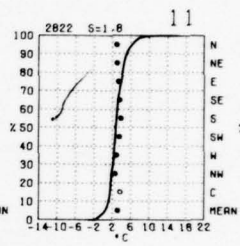


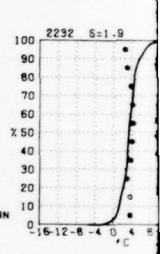


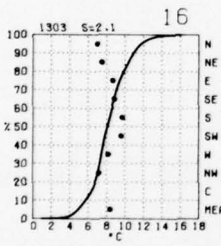


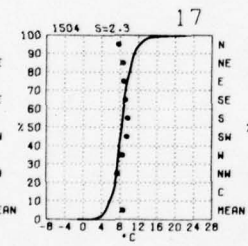


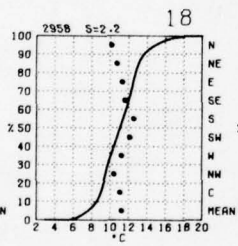


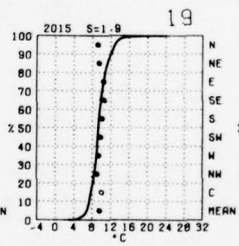


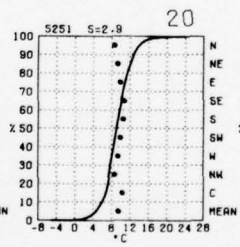


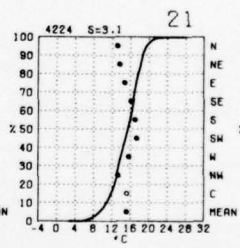


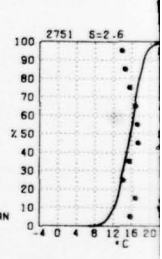


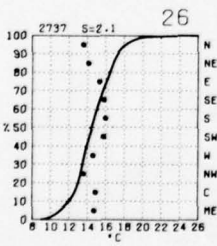


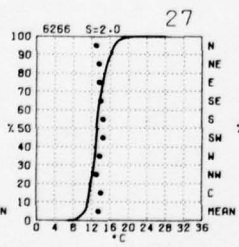


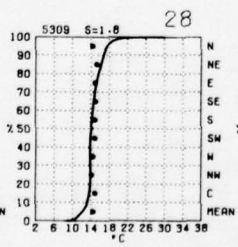


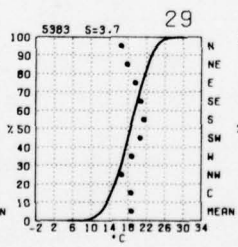


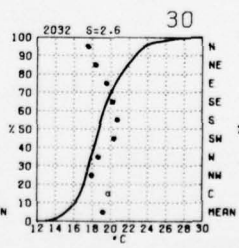


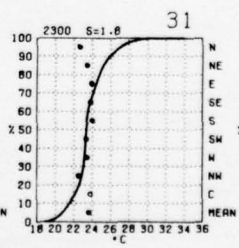


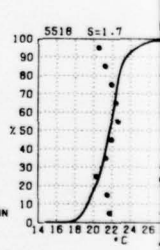


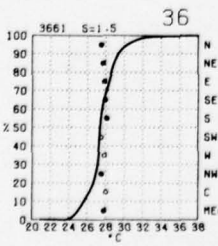


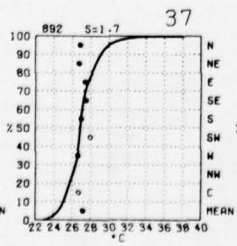


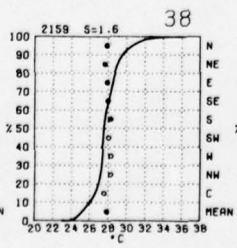


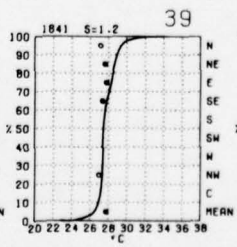


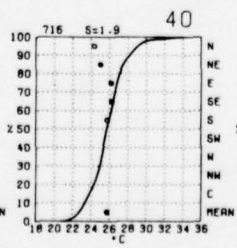


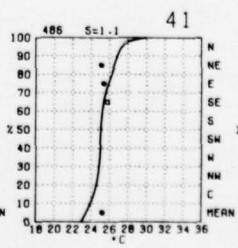


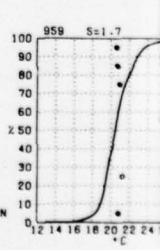








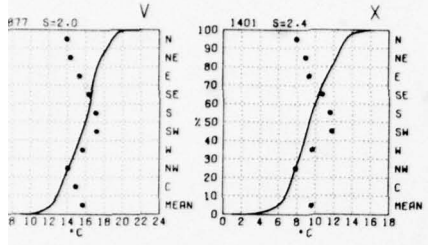


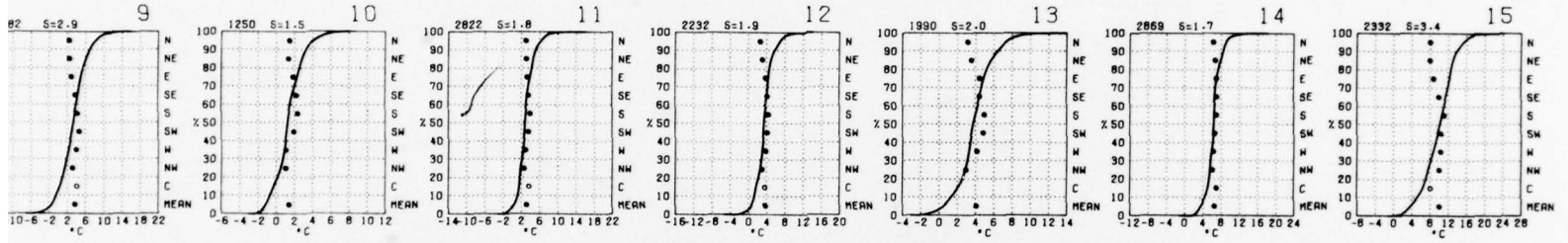


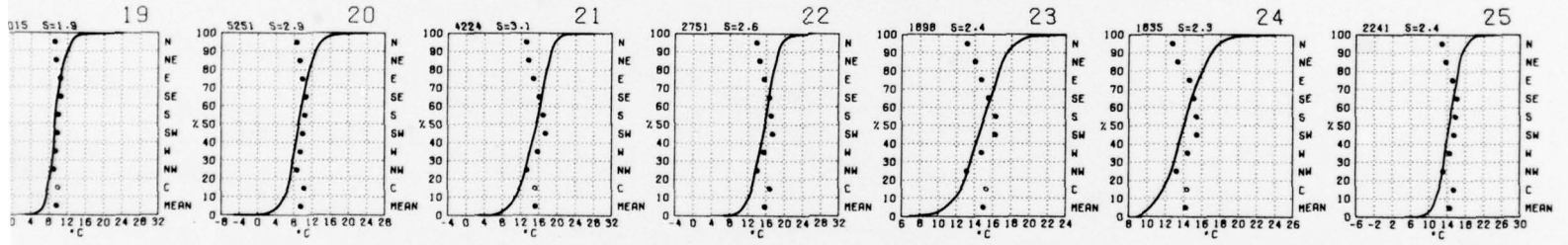
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

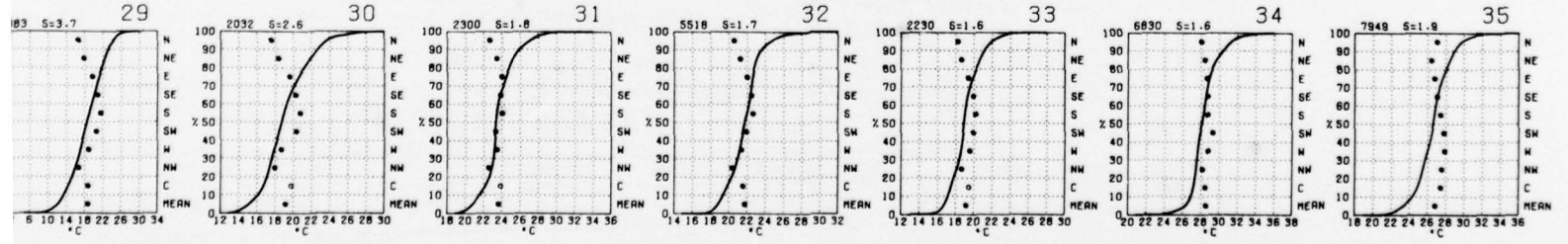
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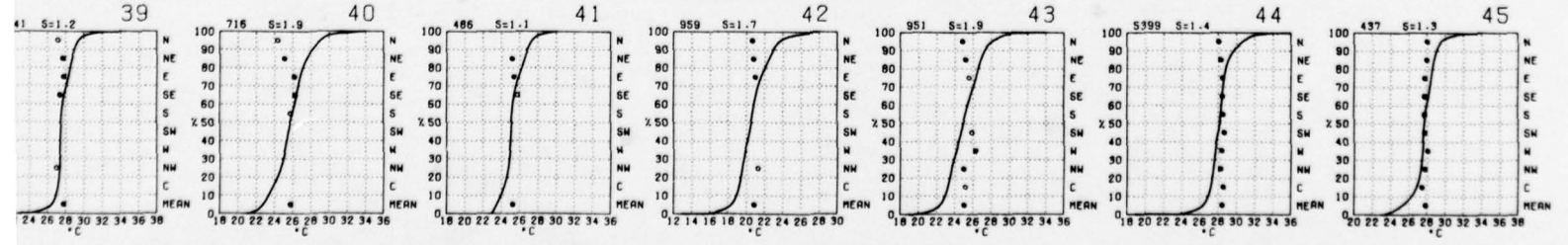
APRIL







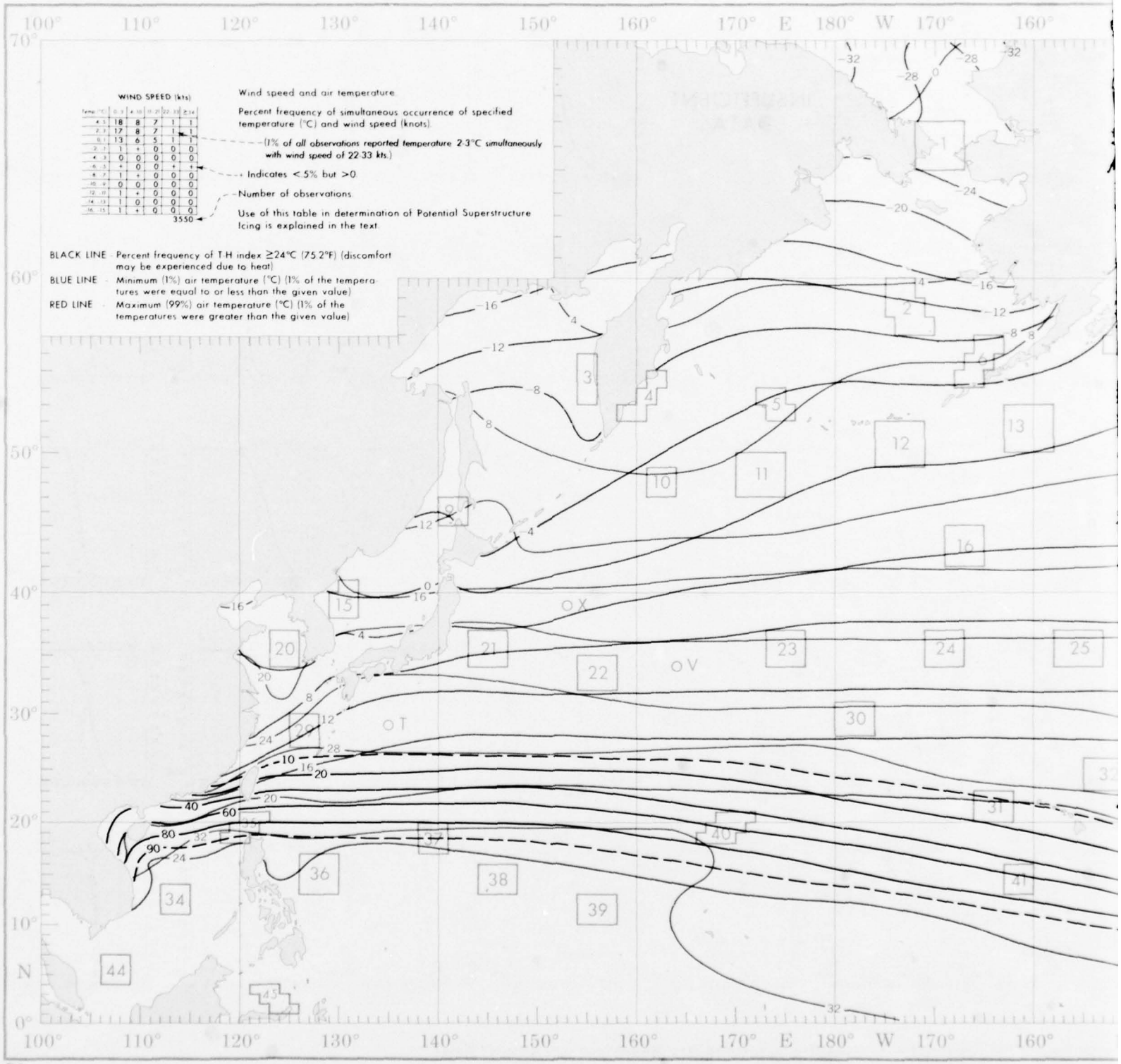




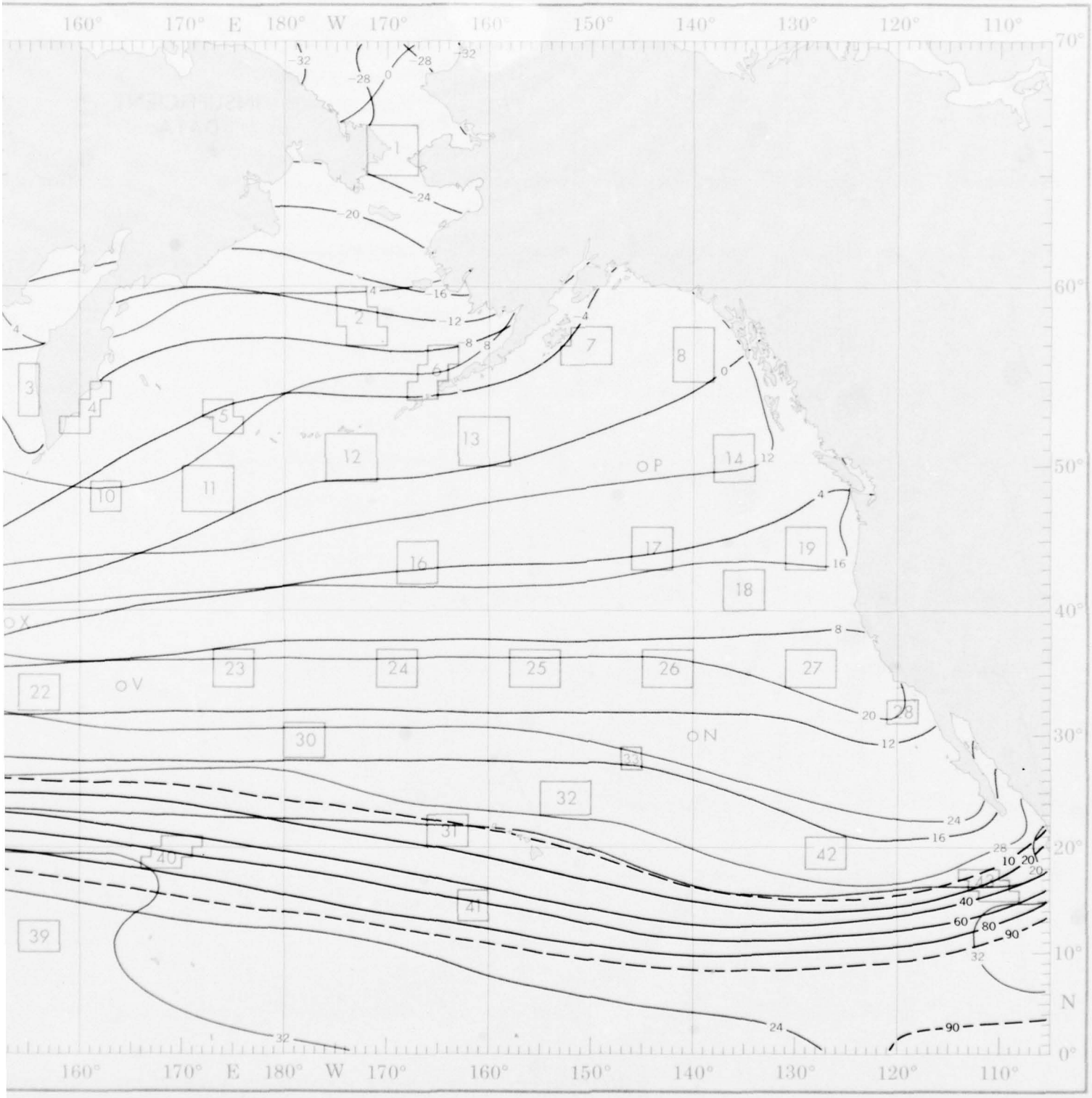
ent the objective compilation of available data for specified areas without regard to suspected biases.
nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	0	0
20.21	+	1	1	+	0
18.19	3	14	20	3	+
16.17	3	15	29	5	+
14.15	+	2	3	+	0
12.13	+	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

4725

P

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	0	0
10.11	0	+	0	+	0
8.9	+	1	1	1	+
6.7	1	6	16	13	3
4.5	1	7	18	16	4
2.3	+	1	3	4	1
0.1	0	0	+	+	+
-2.-1	0	0	0	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

5711

T

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	1	5	3	+
20.21	1	6	16	10	+
18.19	2	8	26	8	+
16.17	0	3	5	4	+
14.15	+	+	1	0	0
12.13	0	0	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

706

V

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	+	+	+	0
18.19	1	4	11	5	+
16.17	2	10	20	6	1
14.15	2	7	12	5	+
12.13	1	4	6	2	+
10.11	+	+	1	+	0
8.9	0	0	0	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

3877

X

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	+	0
14.15	0	+	1	1	1
12.13	+	2	10	7	2
10.11	1	3	10	7	3
8.9	1	5	14	10	4
6.7	+	2	5	6	3
4.5	+	+	1	1	+
2.3	0	+	+	+	+
0.1	0	0	0	0	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1401

1

INSUFFICIENT DATA

WIND SPEED

TEMP (°C)	0-3	4-10	11-
4.5	0	0	
2.3	+	3	
0.1	1	6	
-2.-1	1	6	
-4.-3	1	3	
-6.-5	1	1	
-8.-7	+	1	
-10.-9	+	2	
-12.-11	0	+	
-14.-13	0	0	
-16.-15	0	0	

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	+	0	0	0
10.11	0	+	0	0	0
8.9	+	+	+	+	+
6.7	1	1	1	+	+
4.5	1	3	5	4	+
2.3	2	8	17	8	1
0.1	1	3	11	5	1
-2.-1	+	2	6	4	1
-4.-3	+	1	4	2	+
-6.-5	+	1	1	1	+
-8.-7	0	+	+	1	+

3479

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	+	0
10.11	0	+	0	+	0
8.9	+	1	1	1	+
6.7	1	5	6	3	1
4.5	1	14	17	6	1
2.3	1	7	13	6	3
0.1	0	2	2	1	1
-2.-1	0	+	1	1	0
-4.-3	0	0	1	+	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

375

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	+	0
10.11	+	+	1	0	0
8.9	+	2	3	0	+
6.7	1	11	13	3	1
4.5	1	11	20	7	3
2.3	1	5	8	4	1
0.1	0	1	1	1	+
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

559

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	+	+	+	0	0
10.11	+	1	+	0	+
8.9	1	2	3	1	0
6.7	2	7	6	2	+
4.5	2	11	12	3	+
2.3	2	9	8	4	1
0.1	1	6	5	3	+
-2.-1	+	2	1	1	+
-4.-3	+	1	0	+	+
-6.-5	0	0	+	0	0

982

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	+	+	0	0
6.7	0	+	1	+	0
4.5	+	2	4	2	1
2.3	1	7	19	11	2
0.1	1	8	18	12	3
-2.-1	+	1	3	2	1
-4.-3	0	+	+	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1250

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	0	+	+	0	0
10.11	0	+	+	0	0
8.9	+	1	1	+	0
6.7	+	2	4	2	1
4.5	+	6	15	8	2
2.3	1	9	17	12	4
0.1	+	2	4	4	2
-2.-1	0	+	+	+	+
-4.-3	0	0	0	+	0
-6.-5	0	0	0	0	0

2822

WIND SPEED (K

TEMP (°C)	0-3	4-10	11-
14.15	0	0	
12.13	0	0	+
10.11	0	+	
8.9	0	1	
6.7	+	3	
4.5	1	9	16
2.3	1	8	14
0.1	+	1	
-2.-1	0	+	+
-4.-3	0	+	0
-6.-5	0	0	+

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	0	+	+	+	0
12.13	+	1	3	2	1
10.11	+	3	10	6	2
8.9	+	8	16	9	2
6.7	+	6	14	8	1
4.5	+	1	2	2	+
2.3	0	+	+	+	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1303

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	+	+	0	0
16.17	0	+	+	0	0
14.15	+	1	1	+	0
12.13	+	2	4	1	+
10.11	+	8	11	5	+
8.9	1	11	17	9	1
6.7	+	5	10	6	1
4.5	0	1	2	2	+
2.3	+	+	+	+	0
0.1	0	+	+	0	0

1504

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	0	0
18.19	+	+	+	0	0
16.17	+	1	2	1	0
14.15	+	3	4	2	+
12.13	1	11	15	4	+
10.11	2	10	16	5	+
8.9	1	4	8	4	1
6.7	0	1	1	1	+
4.5	0	+	+	+	0
2.3	0	0	0	+	0
0.1	0	0	0	0	0

2958

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	0	0	0
20.21	0	+	+	0	0
18.19	+	+	0	+	0
16.17	+	+	+	0	0
14.15	+	1	1	+	0
12.13	1	5	6	2	+
10.11	1	7	17	5	1
8.9	2	10	21	9	1
6.7	+	2	4	3	+
4.5	0	+	1	+	0
2.3	0	0	+	+	0

2015

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	+	0	0
22.23	+	+	+	0	0
20.21	+	+	+	0	0
18.19	+	+	+	+	0
16.17	+	1	+	+	+
14.15	1	3	1	+	+
12.13	3	9	4	+	+
10.11	4	14	6	1	+
8.9	5	16	7	1	+
6.7	2	8	4	2	+
«5	+	2	2	1	+

5252

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	+	+	0	0
22.23	0	+	1	+	+
20.21	+	+	1	1	+
18.19	+	4	9	5	1
16.17	1	7	12	5	1
14.15	1	5	8	4	1
12.13	1	4	7	4	1
10.11	+	2	3	1	+
8.9	+	1	1	1	+
«7	+	+	+	+	+

4225

WIND SPEED (K

TEMP (°C)	0-3	4-10	11-
24.25	+	+	
22.23	+	1	
20.21	+	1	2
18.19	1	5	11
16.17	1	9	15
14.15	1	7	9
12.13	1	4	7
10.11	+	1	2
8.9	0	+	+
6.7	0	0	0
4.5	0	0	0

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	0	0	0	0
22.23	+	+	+	0	+
20.21	+	1	1	+	0
18.19	+	2	4	1	+
16.17	2	11	14	3	+
14.15	2	12	14	3	+
12.13	1	8	10	5	1
10.11	+	1	3	1-	+
8.9	0	0	+	+	0
6.7	0	0	0	0	0

2737

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	0	0	+	0	0
22.23	0	+	+	+	0
20.21	+	+	+	+	0
18.19	+	1	1	+	0
16.17	1	5	6	1	+
14.15	1	10	12	3	+
12.13	1	11	21	8	1
10.11	+	2	7	3	+
8.9	+	+	+	+	+
6.7	0	0	0	0	0

6269

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	0	0	+	0	0
24.25	+	+	+	0	0
22.23	+	+	+	0	0
20.21	+	+	+	+	0
18.19	1	2	2	+	0
16.17	2	9	9	1	+
14.15	2	17	20	3	+
12.13	1	9	15	4	+
10.11	+	+	1	0	+
8.8	0	0	0	0	0

5312

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	0	+	+	0	0
26.27	+	1	1	+	+
24.25	+	3	3	+	+
22.23	1	6	7	1	+
20.21	1	8	8	1	+
18.19	1	8	9	2	+
16.17	1	6	8	3	+
14.15	1	3	4	2	+
12.13	+	2	2	1	+
«11	+	+	1	1	+

5387

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	+	0	0
26.27	+	1	1	+	0
24.25	1	1	1	+	0
22.23	1	5	6	1	0
20.21	1	9	9	2	+
18.19	1	10	18	4	+
16.17	1	7	11	3	1
14.15	+	1	2	1	+
12.13	0	+	+	+	0
10.11	0	0	0	0	0
8.8	0	0	0	0	0

2032

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	+	0
30.31	+	+	+	0	0
28.29	+	1	1	+	+
26.27	+	4	6	+	+
24.25	2	10	20	3	+
22.23	1	10	26	7	+
20.21	+	2	4	1	+
18.19	+	+	+	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2307

WIND SPEED (K

TEMP (°C)	0-3	4-10	11-
30.31	0	0	
28.29	+	+	
26.27	+	1	1
24.25	+	2	5
22.23	1	10	29
20.21	1	8	21
18.19	+	2	6
16.17	+	+	
14.15	0	+	
12.13	0	0	
10.11	0	0	

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	+	+	0	0
34.35	0	+	+	0	0
32.33	+	1	1	0	0
30.31	+	6	4	+	0
28.29	2	24	17	1	+
26.27	1	22	16	1	+
24.25	+	1	2	+	+
22.23	0	+	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3661

37

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	0	+	0	0
32.33	0	1	1	0	0
30.31	1	3	3	0	0
28.29	2	14	10	1	0
26.27	3	24	24	3	0
24.25	+	3	5	+	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

892

38

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	1	1	+	0
30.31	+	4	6	+	0
28.29	1	14	25	2	+
26.27	1	14	26	2	+
24.25	0	1	1	+	+
22.23	0	0	+	0	+
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2159

39

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	0	1	5	+	0
28.29	+	7	36	3	0
26.27	+	9	33	4	+
24.25	0	+	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1341

40

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	1	0	0
30.31	0	+	2	+	0
28.29	1	2	10	1	0
26.27	1	8	29	5	+
24.25	+	6	18	5	+
22.23	+	3	5	2	0
20.21	0	+	+	+	+
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

716

41

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	3	1	0
26.27	1	9	24	6	0
24.25	+	9	34	10	0
22.23	0	+	2	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

486

WIND SPEED (K

TEMP (°C)	0-3	4-10	11-
28.29	0	0	
26.27	0	+	1
24.25	+	2	3
22.23	1	7	15
20.21	1	12	30
18.18	+	4	15
16.17	+	+	
14.15	0	0	
12.13	0	0	
10.11	0	0	
8.9	0	0	0

Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

ERATURE

APRIL

INSUFFICIENT DATA

SPEED (KTS) V				
4-10	11-21	22-33	≥ 34	
*	*	*	0	
4	11	5	*	
10	20	6	1	
7	12	5	*	
4	6	2	*	
*	1	*	0	
0	0	*	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

3877

WIND SPEED (KTS) X					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	0	*	0
14.15	0	*	1	1	1
12.13	*	2	10	7	2
10.11	1	3	10	7	3
8.9	1	5	14	10	4
6.7	*	2	5	6	3
4.5	*	*	1	1	*
2.3	0	*	*	*	*
0.1	0	0	0	0	*
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1401

1

WIND SPEED (KTS) 2					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	0	0	*	0
2.3	*	3	10	4	1
0.1	1	6	14	6	1
-2.-1	1	6	11	4	1
-4.-3	1	3	4	3	*
-6.-5	1	1	3	2	*
-8.-7	*	1	3	1	*
-10.-9	*	2	3	1	*
-12.-11	0	*	1	*	0
-14.-13	0	0	*	0	0
-16.-15	0	0	0	0	0

1170

WIND SPEED (KTS) 3					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	*	*	0	0
8.9	*	*	*	0	0
6.7	*	1	*	*	0
4.5	1	3	1	*	*
2.3	2	6	4	1	*
0.1	3	10	12	6	1
-2.-1	3	10	12	5	1
-4.-3	1	3	5	2	*
-6.-5	*	1	2	1	*
-8.-7	*	*	1	*	0
-10.-9	*	*	*	*	0

2987

WIND SPEED (KTS) 4					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	*	*	0	0	0
8.9	1	*	*	0	0
6.7	1	1	*	0	0
4.5	2	3	3	*	0
2.3	4	7	6	2	0
0.1	4	11	12	4	1
-2.-1	2	9	11	5	1
-4.-3	*	2	2	2	1
-6.-5	*	1	1	1	0
-8.-7	0	*	*	*	0
-10.-9	0	*	0	0	0

667

WIND SPEED (KTS) 5					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	*	*	*	0	0
8.9	*	1	*	0	0
6.7	3	2	3	1	0
4.5	5	5	6	2	*
2.3	4	15	19	7	1
0.1	*	4	8	4	2
-2.-1	*	2	3	2	*
-4.-3	0	*	0	0	0
-6.-5	0	0	*	*	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

738

SPEED (KTS) 9				
4-10	11-21	22-33	≥ 34	
*	0	0	0	
*	*	0	0	
1	*	*	0	
2	3	1	0	
7	6	2	*	
11	12	3	*	
9	8	4	1	
6	5	3	*	
2	1	1	*	
1	0	*	*	
0	*	0	0	

982

WIND SPEED (KTS) 10					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	*	*	0	0
6.7	0	*	1	*	0
4.5	*	2	4	2	1
2.3	1	7	19	11	2
0.1	1	8	18	12	3
-2.-1	*	1	3	2	1
-4.-3	0	*	*	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

1250

WIND SPEED (KTS) 11					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	*	0	0	0
12.13	0	*	*	0	0
10.11	0	*	*	*	0
8.9	*	1	1	*	0
6.7	*	2	4	2	1
4.5	*	6	15	8	2
2.3	1	9	17	12	4
0.1	*	2	4	4	2
-2.-1	0	*	*	*	*
-4.-3	0	0	0	*	0
-6.-5	0	0	0	0	0

2822

WIND SPEED (KTS) 12					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	0	*	0
12.13	0	0	*	*	0
10.11	0	*	*	*	0
8.9	0	1	1	*	0
6.7	*	3	7	4	1
4.5	1	9	16	10	2
2.3	1	8	14	9	3
0.1	*	1	3	2	*
-2.-1	0	*	*	*	*
-4.-3	0	*	0	*	*
-6.-5	0	0	*	0	0

2232

WIND SPEED (KTS) 13					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	*	*	0	0
10.11	*	*	*	*	0
8.9	*	1	2	*	*
6.7	*	4	8	4	1
4.5	1	8	19	12	2
2.3	1	6	11	6	2
0.1	*	1	2	2	1
-2.-1	0	*	*	1	*
-4.-3	0	0	0	*	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1990

WIND SPEED (KTS) 14					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	*	0	0
14.15	0	*	*	*	0
12.13	*	*	*	*	0
10.11	*	1	2	*	0
8.9	1	6	12	5	1
6.7	1	12	25	10	2
4.5	1	4	9	4	1
2.3	0	*	1	1	*
0.1	0	0	*	*	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

2869

WIND SPEED (KTS) 15					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	*	*	0	0
20.21	*	*	*	0	0
18.19	0	*	*	*	*
16.17	*	1	2	*	0
14.15	*	2	5	1	*
12.13	1	6	15	3	*
10.11	1	8	10	2	*
8.9	1	8	6	1	*
6.7	2	7	4	1	*
4.5	1	4	2	*	0
43	*	2	1	*	0

2332

SPEED (KTS) 19				
4-10	11-21	22-33	≥ 34	
0	*	0	0	
*	*	0	0	
*	0	*	0	
*	*	0	0	
1	1	*	0	
5	6	2	*	
7	17	5	1	
10	21	9	1	
2	4	3	*	
*	1	*	0	
0	*	*	0	

2015

WIND SPEED (KTS) 20					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	*	*	0	0	0
22.23	*	*	*	0	0
20.21	*	*	*	0	0
18.19	*	*	*	*	0
16.17	*	1	*	*	*
14.15	1	3	1	*	*
12.13	3	9	4	*	*
10.11	4	14	6	1	*
8.9	5	16	7	1	*
6.7	2	8	4	2	*
45	*	2	2	1	*

5252

WIND SPEED (KTS) 21					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	*	0	0	0
24.25	0	*	*	0	0
22.23	0	*	1	*	*
20.21	*	1	3	1	*
18.19	*	4	9	5	1
16.17	1	7	12	5	1
14.15	1	5	8	4	1
12.13	1	4	7	4	1
10.11	*	2	3	1	*
8.9	*	1	1	1	*
47	*	*	*	*	*

4225

WIND SPEED (KTS) 22					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	*	*	*	0	0
22.23	*	1	*	*	*
20.21	*	1	2	*	*
18.19	1	5	11	5	1
16.17	1	9	15	5	1
14.15	1	7	9	3	1
12.13	1	4	7	4	1
10.11	*	1	2	1	*
8.9	0	*	*	*	*
6.7	0	0	0	*	0
4.5	0	0	0	0	0

2752

WIND SPEED (KTS) 23					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	*	0	0	0
22.23	0	*	*	0	0
20.21	0	1	1	*	0
18.19	*	3	6	1	*
16.17	1	11	15	5	*
14.15	1	7	14	5	1
12.13	1	6	10	4	1
10.11	*	1	2	1	1
8.9	0	0	*	*	*
6.7	0	0	0	*	0
4.5	0	0	0	0	0

1898

WIND SPEED (KTS) 24					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	*	*	*	0	0
20.21	0	1	1	*	0
18.19	*	2	3	*	*
16.17	1	7	12	3	*
14.15	2	10	15	4	1
12.13	1	9	12	4	1
10.11	*	2	5	3	1
8.9	*	*	*	*	*
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1835

WIND SPEED (KTS) 25					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	*	*	0	0
20.21	*	1	1	*	0
18.19	*	4	4	1	*
16.17	1	9	14	3	*
14.15	2	9	14	3	*
12.13	1	8	12	3	1
10.11	*	1	3	1	*
8.9	0	*	*	1	*
6.7	0	0	*	*	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2241

SPEED (KTS) 29				
4-10	11-21	22-33	≥ 34	
*	0	0	0	
*	*	0	0	
1	1	*	*	
3	3	*	*	
6	7	1	*	
8	8	1	*	
8	9	2	*	
6	8	3	*	
3	4	2	*	
2	2	1	*	
*	1	1	*	

5387

WIND SPEED (KTS) 30					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	*	*	*	0	0
26.27	*	1	1	*	0
24.25	1	1	1	*	0
22.23	1	5	6	1	0
20.21	1	9	9	2	*
18.19	1	10	18	4	*
16.17	1	7	11	3	1
14.15	*	1	2	1	*
12.13	0	*	*	*	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

2032

WIND SPEED (KTS) 31					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	*	*	0
30.31	*	*	*	0	0
28.29	*	1	1	*	*
26.27	*	4	6	*	*
24.25	2	10	20	3	*
22.23	1	10	26	7	*
20.21	*	2	4	1	*
18.19	*	*	*	*	*
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2307

WIND SPEED (KTS) 32					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	*	0	0
28.29	*	*	*	*	*
26.27	*	1	1	*	*
24.25	*	2	6	1	0
22.23	1	10	29	6	*
20.21	1	8	21	4	*
18.19	*	2	4	1	*
16.17	*	*	*	*	0
14.15	0	*	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

5519

WIND SPEED (KTS) 33					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	*	*	0	0
24.25	*	*	*	*	0
22.23	1	3	2	*	0
20.21	1	10	15	2	*
18.19	2	16	30	4	0
16.17	*	3	6	2	0
14.15	*	0	*	*	*
12.13	0	0	0	*	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2230

WIND SPEED (KTS) 34					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	*	*	0	0
34.35	*	1	*	0	0
32.33	*	3	1	*	0
30.31	1	12	5	*	0
28.29	5	34	15	*	*
26.27	2	12	6	1	0
24.25	*	*	*	*	0
22.23	*	*	*	0	0
20.21	0	*	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

6832

WIND SPEED (KTS) 35					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	*	*	0	0	0
32.33	*	1	*	*	0
30.31	1	4	2	*	0
28.29	4	13	10	1	*
26.27	4	16	19	5	*
24.25	1	4	7	4	*
22.23	*	*	1	1	*
20.21	*	*	*	*	*
18.18	0	*	*	*	0
18.17	0	0	0	0	0
14.15	0	0	0	0	0

7957

SPEED (KTS) 39				
4-10	11-21	22-33	≥ 34	
*	*	0	0	
1	5	*	0	
7	36	3	0	
9	33	4	*	
*	*	*	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

1841

WIND SPEED (KTS) 40					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	1	0	0
30.31	0	*	2	*	0
28.29	1	2	10	1	0
26.27	1	8	29	5	*
24.25	*	6	18	5	*
22.23	0	*	3	2	0
20.21	0	*	*	*	*
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

716

WIND SPEED (KTS) 41					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	*	0	0
28.29	0	*	3	1	0
26.27	1	9	24	6	0
24.25	*	9	34	10	0
22.23	0	*	2	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

486

WIND SPEED (KTS) 42					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	*	0	0
26.27	0	*	1	0	0
24.25	*	2	3	*	0
22.23	1	7	15	2	*
20.21	1	12	30	3	*
18.19	*	4	15	1	0
16.17	*	*	*	0	0
14.15	0	0	*	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

959

WIND SPEED (KTS) 43					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	*	0	0	0
30.31	*	1	1	0	0
28.29	*	5	3	*	0
26.27	2	18	12	0	0
24.25	3	21	14	*	0
22.23	1	11	7	*	0
20.21	*	1	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

954

WIND SPEED (KTS) 44					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	*	0	0	0	0
34.35	*	*	*	0	0
32.33	1	1	*	*	0
30.31	5	8	2	*	0
28.29	19	35	8	*	0
26.27	5	11	3	*	*
24.25	*	1	*	*	0
22.23	*	*	*	0	0
20.21	*	0	*	0	0
18.18	0	0	0	0	0
16.17	0	0	0	0	0

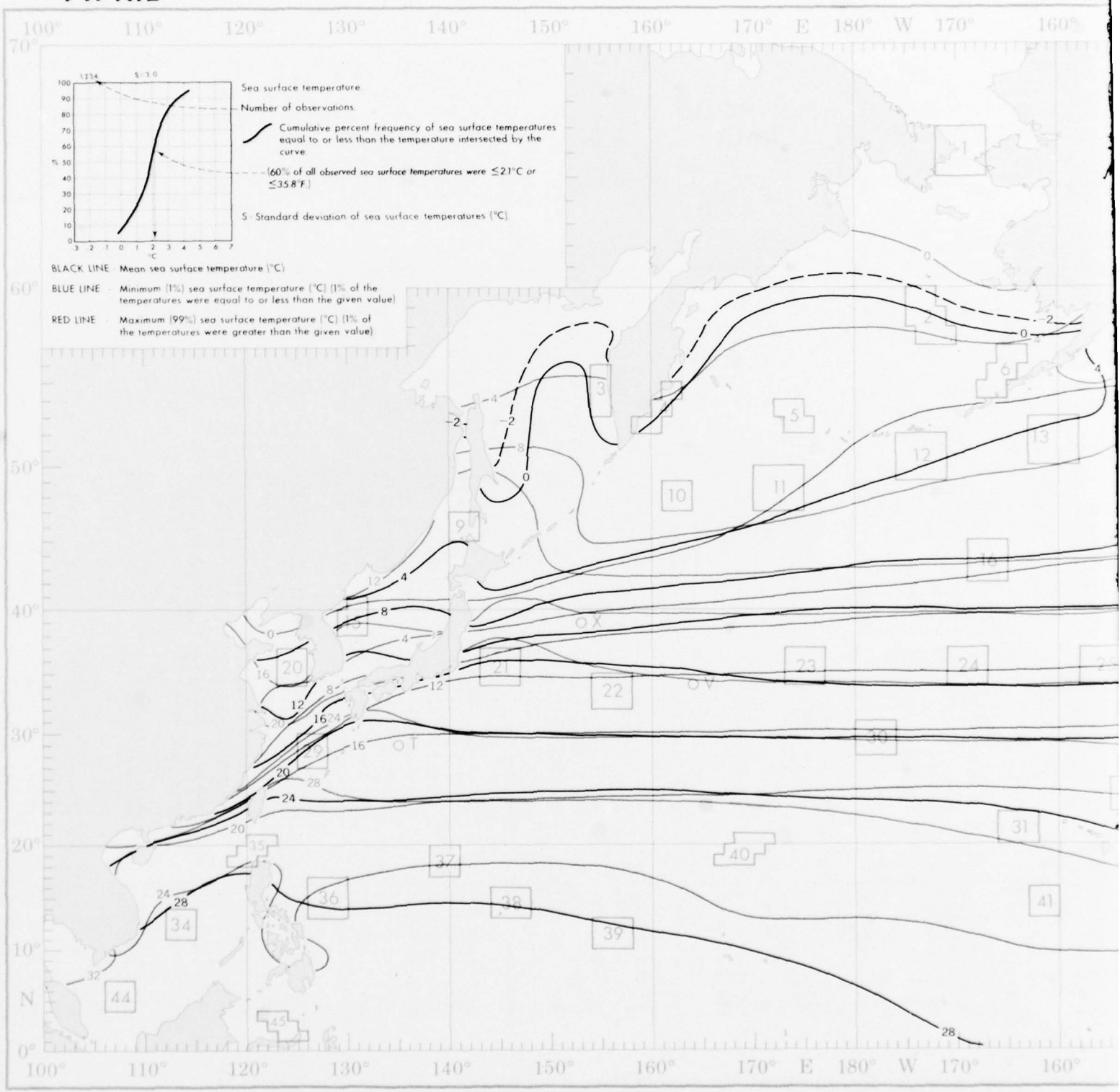
5410

WIND SPEED (KTS) 45					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	*	0	0	0
30.31	2	3	*	0	0
28.29	27	36	4	0	0
26.27	9	12	2	0	0
24.25	3	1	1	0	0
22.25	0	*	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

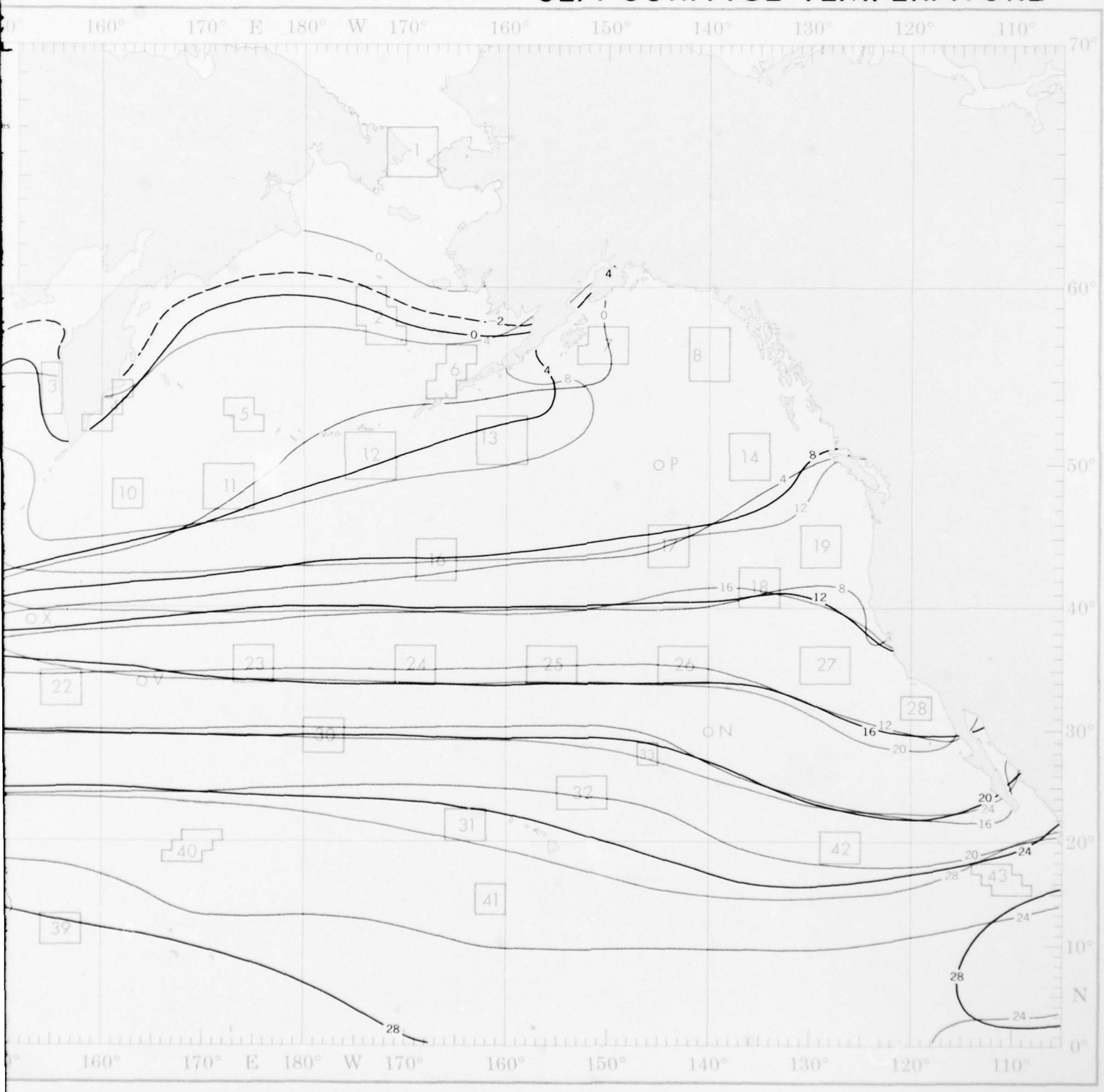
440

ıe objective compilation of available data for specified areas without regard to suspected biases.
ɛs (opposite page) are based on all available data subjectively adjusted where bias was evident.

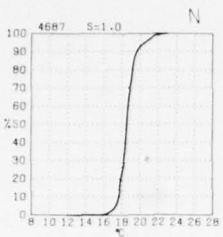
APRIL

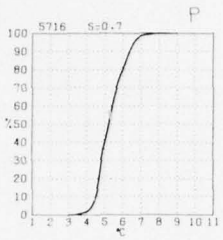

1234
S=3.0
Sea surface temperature
Number of observations
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)
S = Standard deviation of sea surface temperatures (°C)
BLACK LINE - Mean sea surface temperature (°C)
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

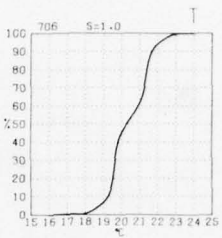
SEA SURFACE TEMPERATURE

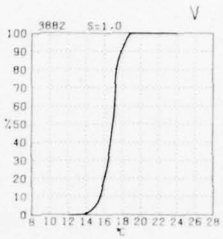


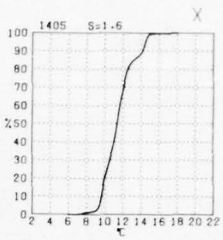
SEA SURFACE TEMPERATURE



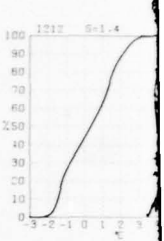


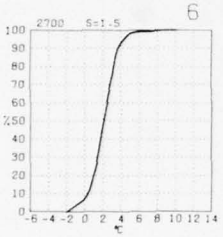


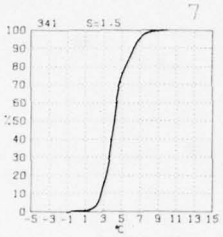


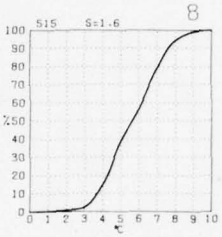


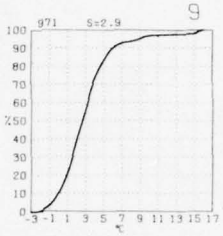
INSUFFICIENT DATA

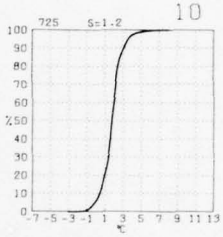


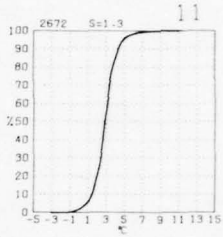


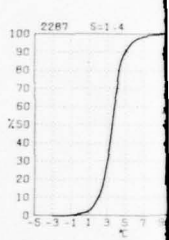


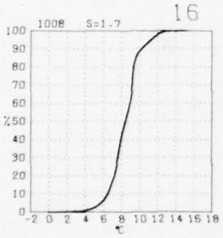


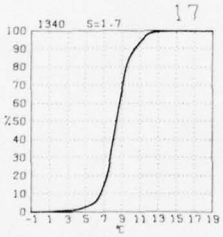


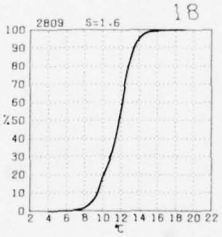


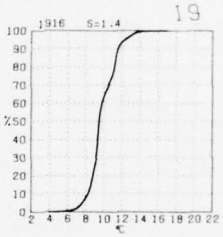


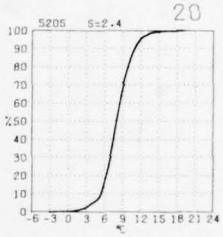


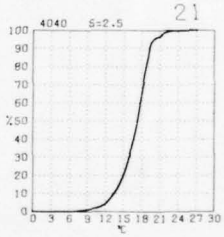


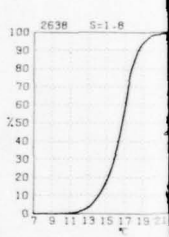


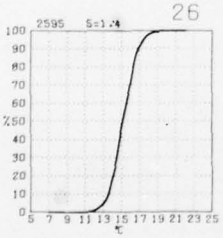


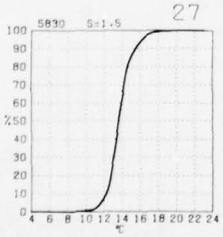


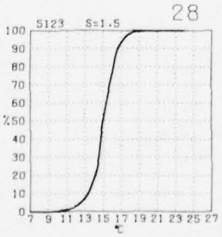


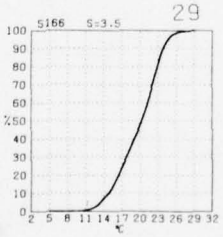


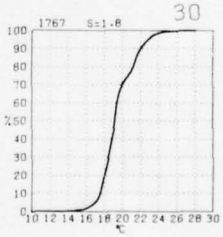


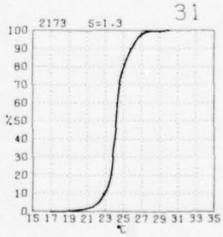


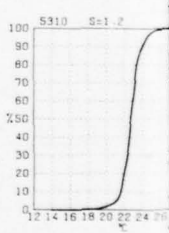


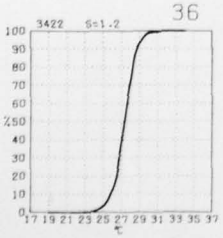


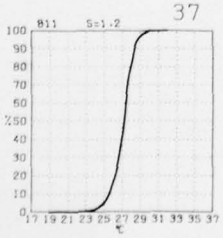


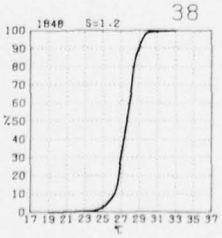


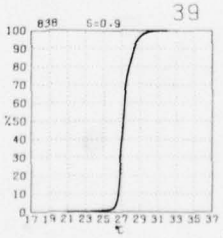


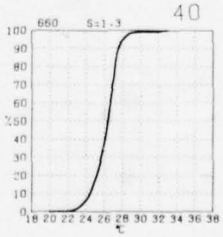


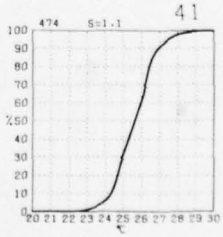


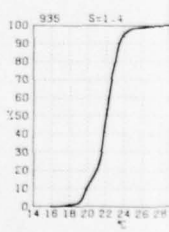








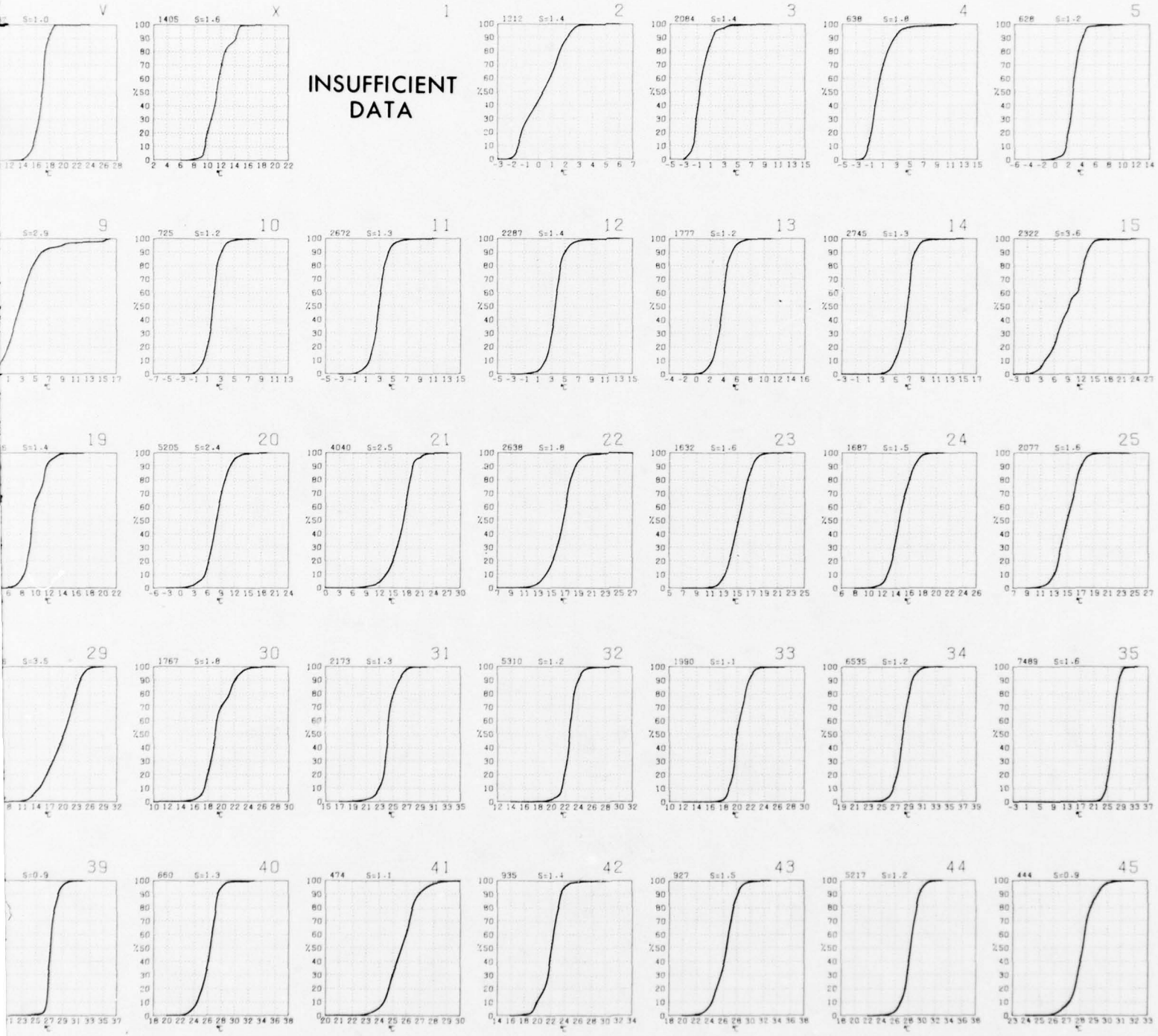




Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

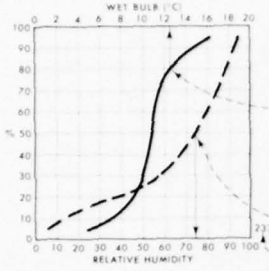
RE

APRIL



nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL



Wet bulb — Relative humidity

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale)

Wet bulb (°C)

(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

Relative humidity (%)

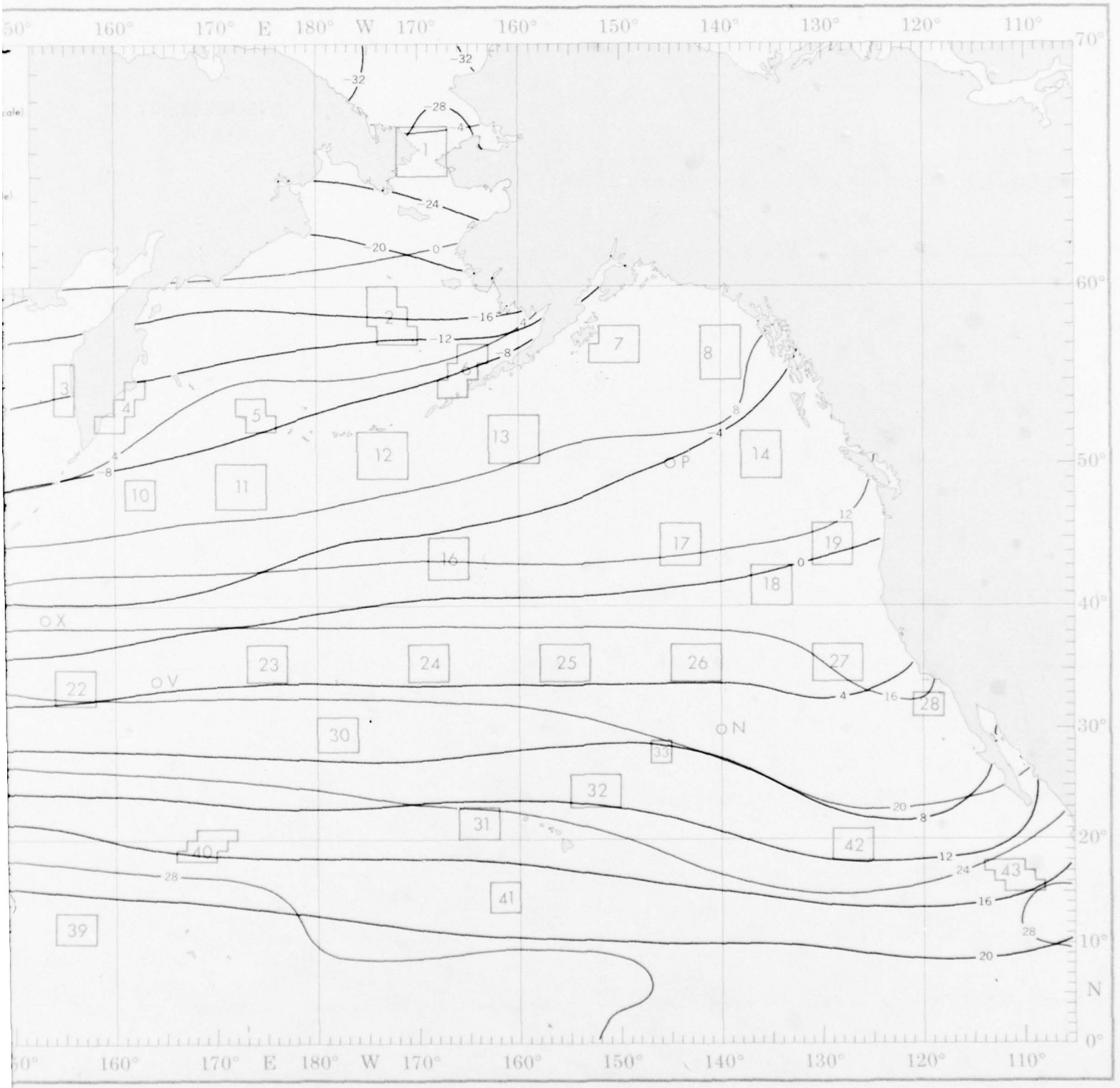
(50% of all observed relative humidities were ≤74%.)

Number of observations

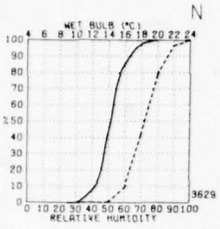
BLUE LINE — Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

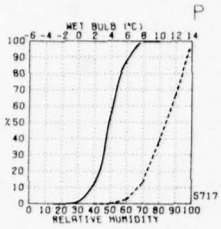
RED LINE — Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

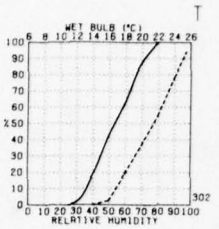
HUMIDITY

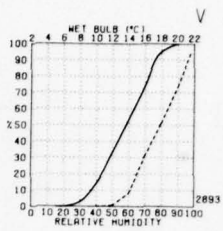

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
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-20
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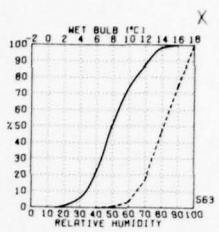
WET BULB AND RELATIVE HUMIDITY



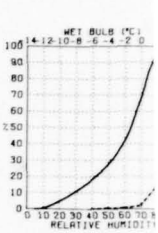


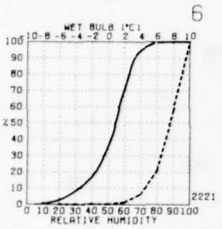


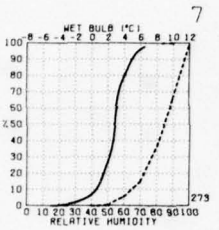


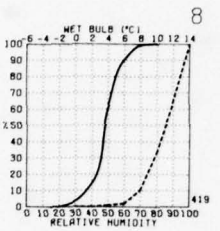


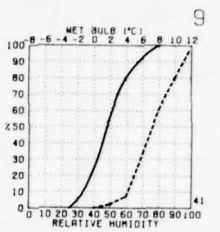
INSUFFICIENT DATA

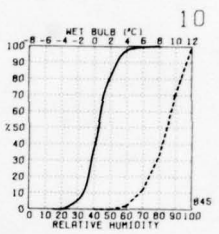


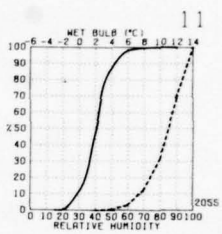


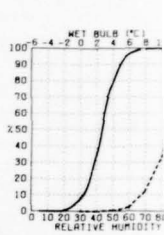


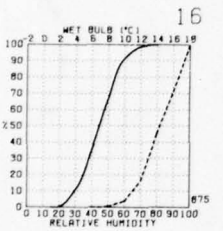


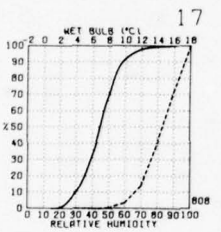


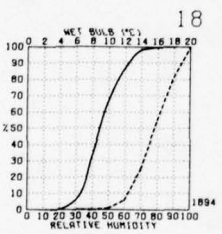


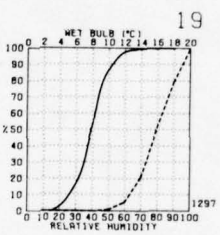


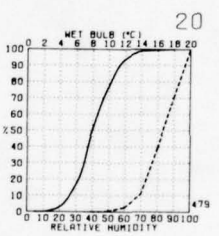


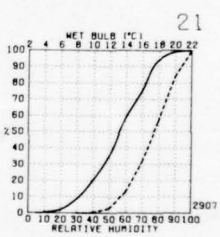


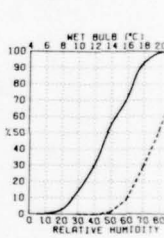


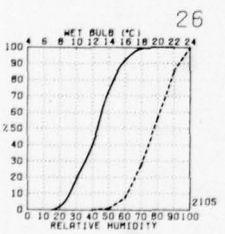


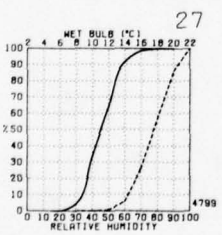


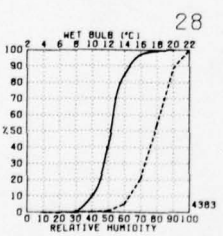


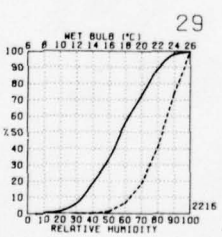


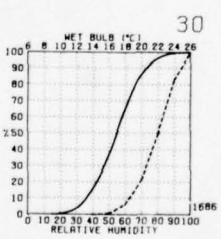


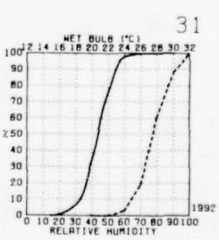


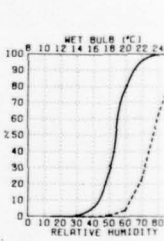


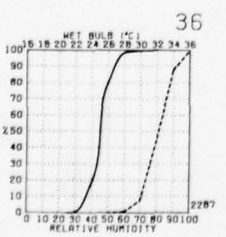


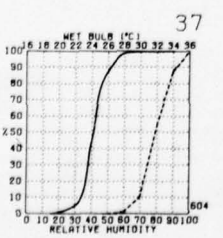


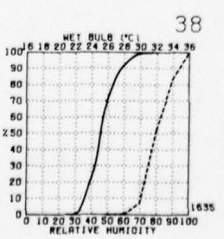


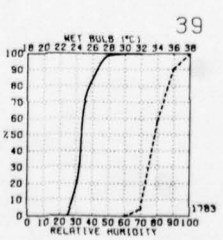


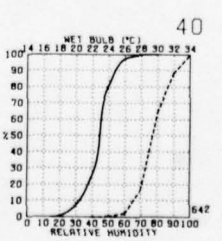


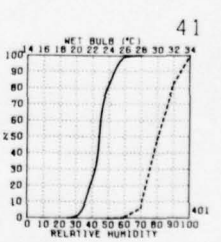


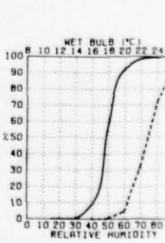










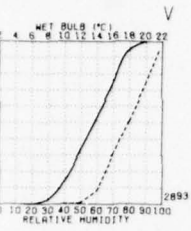


Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

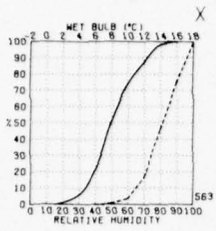
HUMIDITY

APRIL

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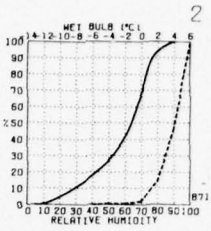
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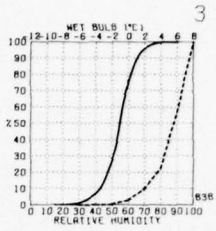
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INSUFFICIENT DATA

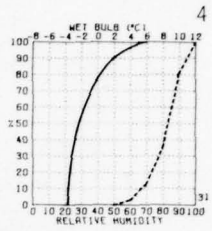
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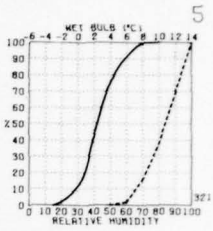
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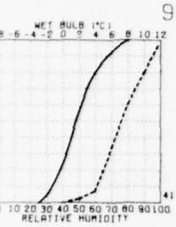
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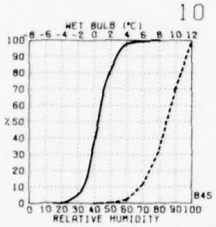
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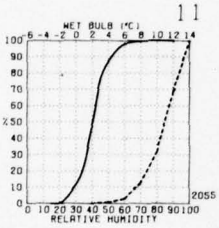
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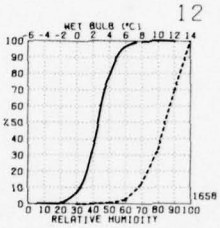
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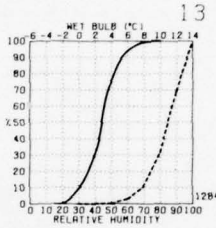
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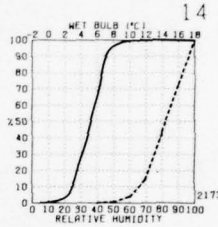
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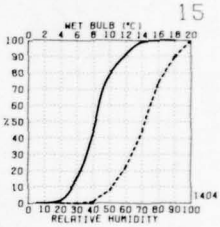
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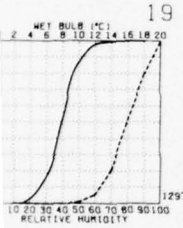
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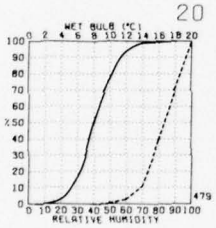
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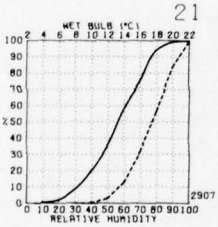
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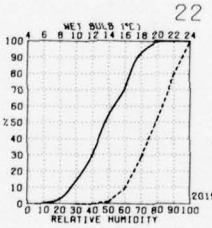
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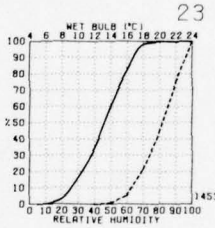
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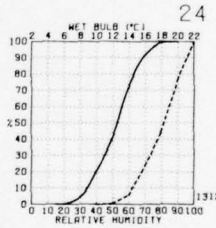
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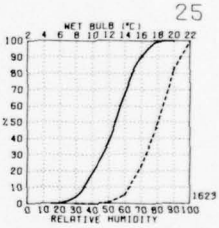
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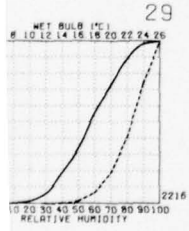
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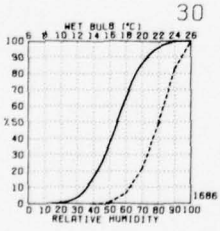
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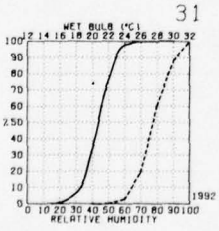
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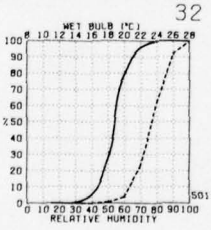
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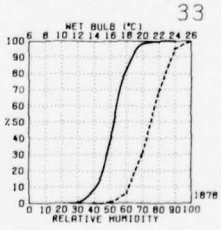
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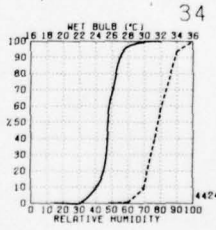
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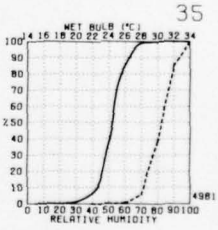
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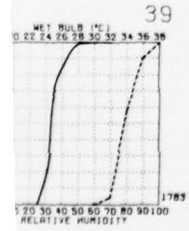
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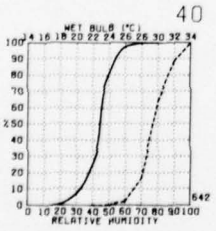
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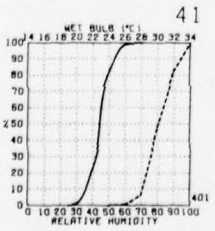
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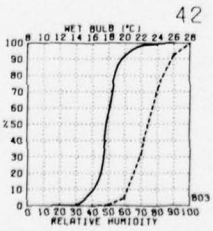
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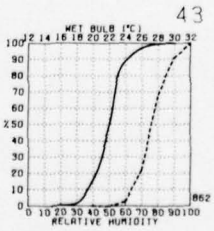
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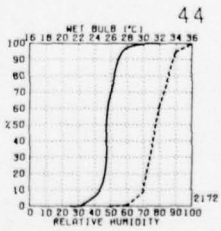
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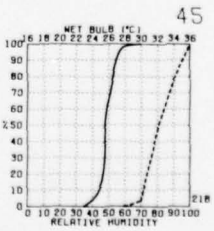
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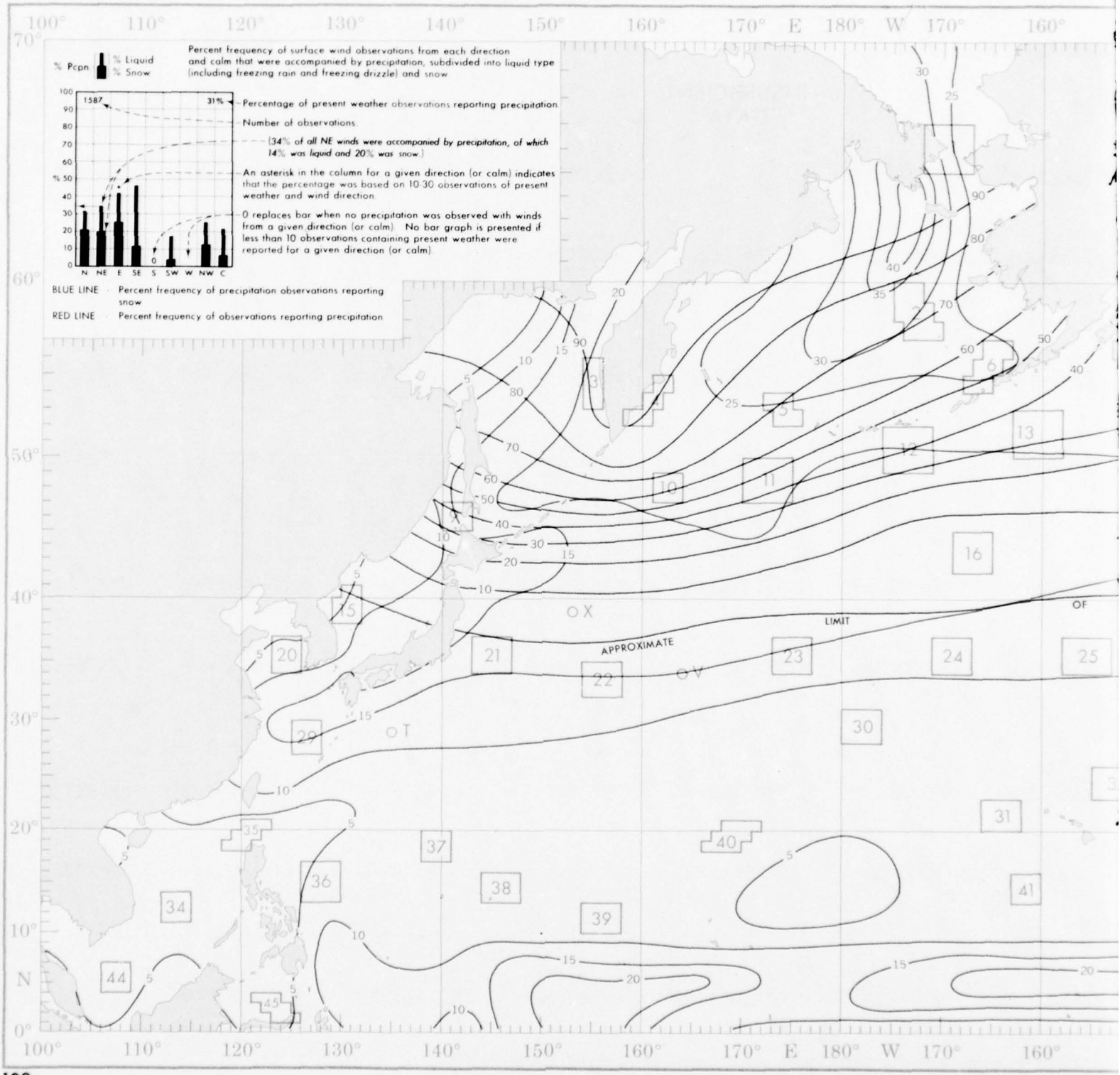


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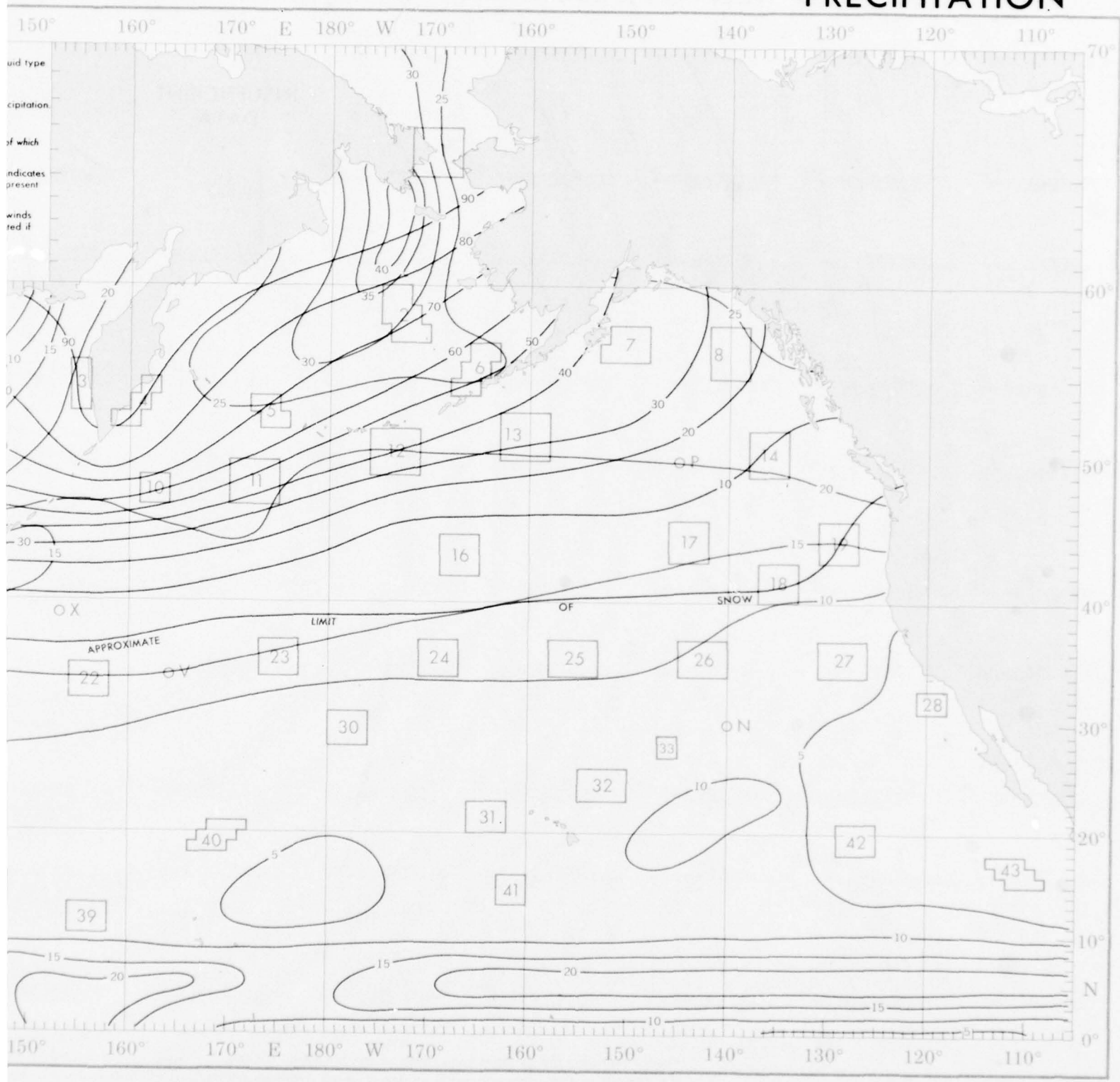


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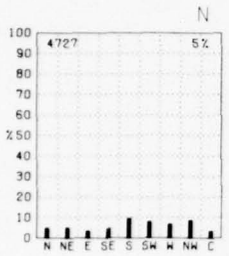
APRIL

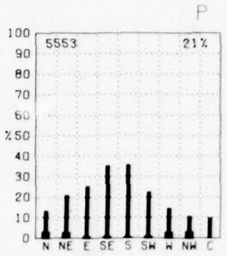

% Pcpn
% Liquid
% Snow
1587
31%
N NE E SE S SW W NW C
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE LIMIT OF

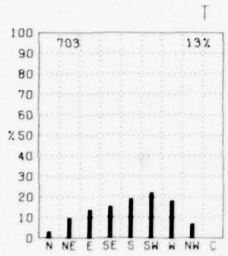
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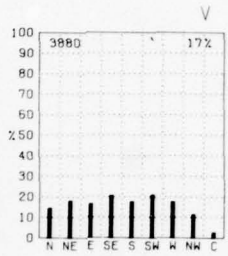


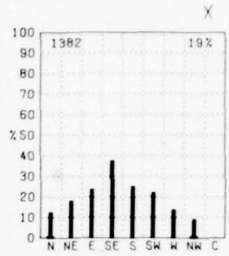
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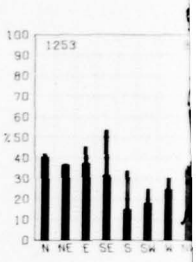


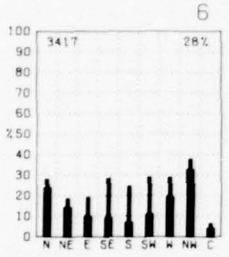


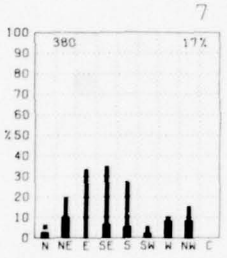


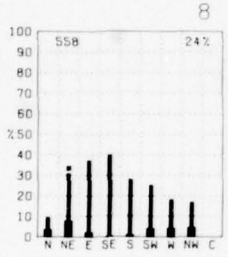


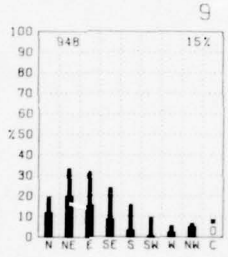
INSUFFICIENT DATA

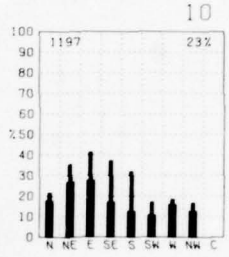


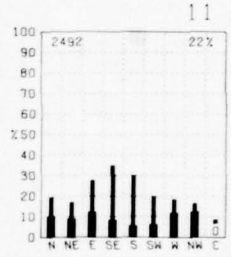


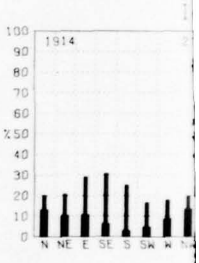


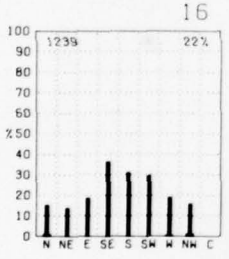


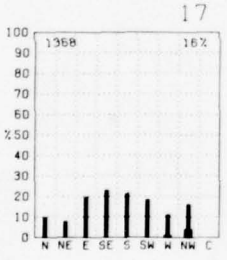


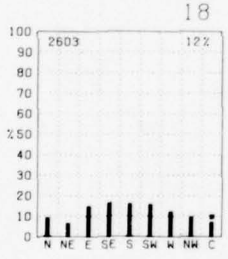


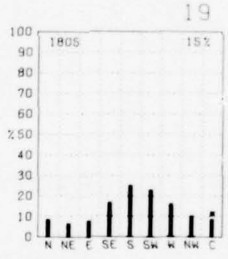


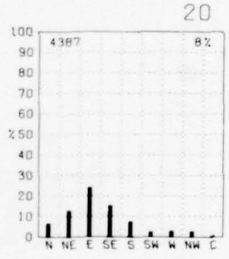


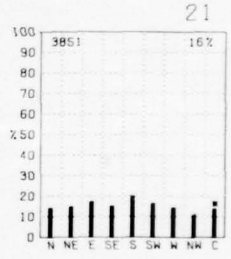


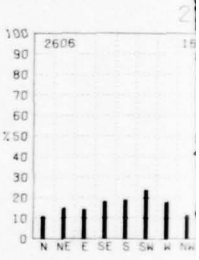


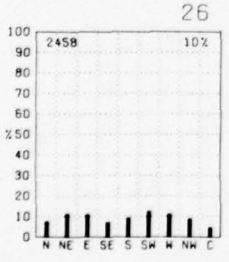


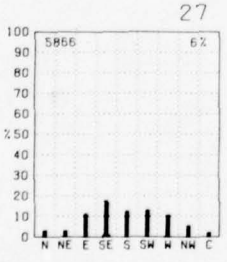


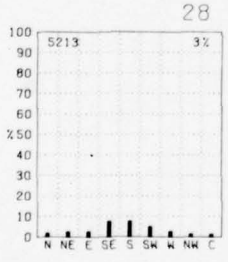


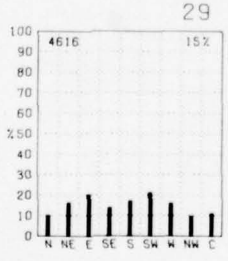


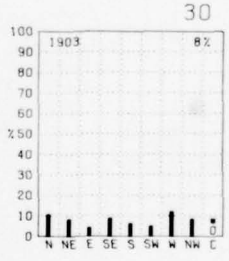


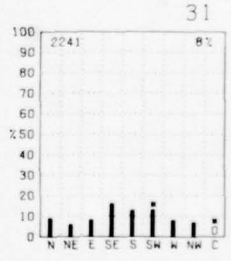


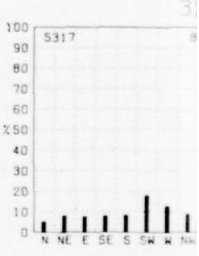


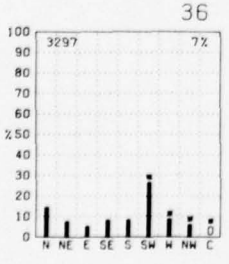


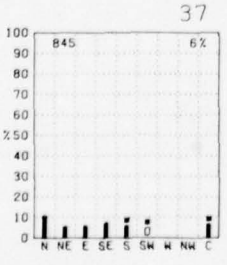


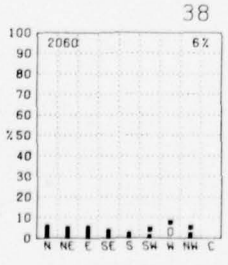


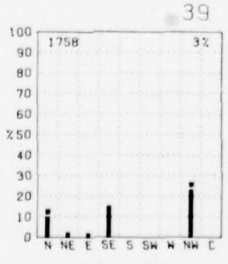


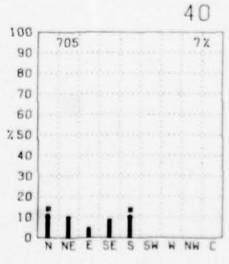


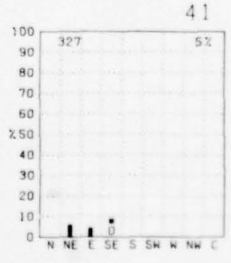


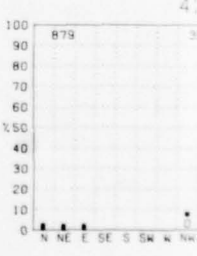






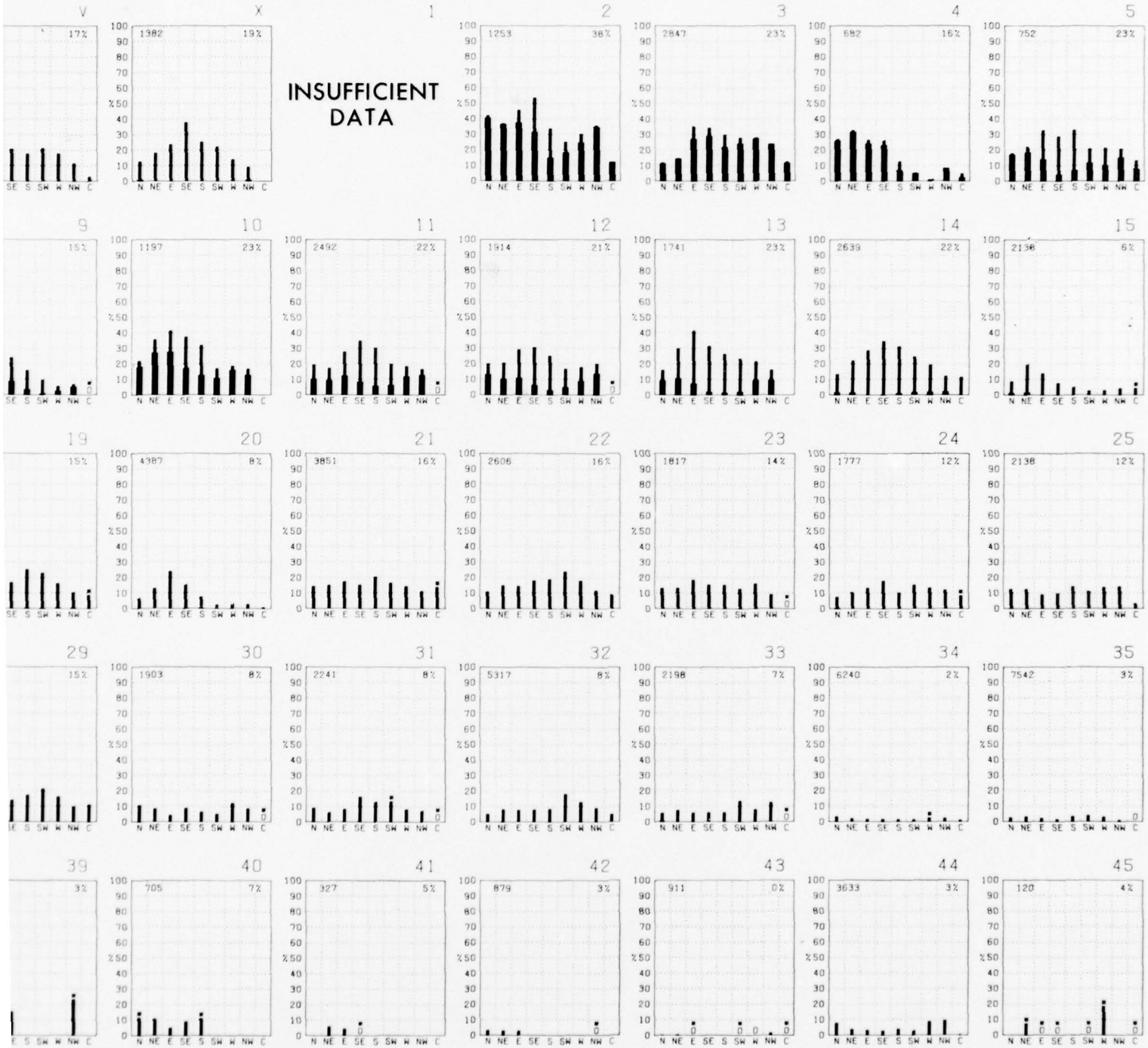






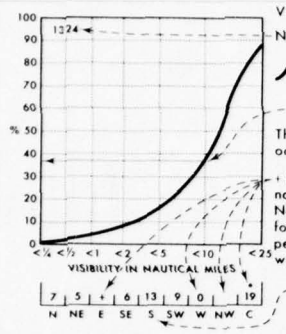
Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

APRIL



e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL



Visibility

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

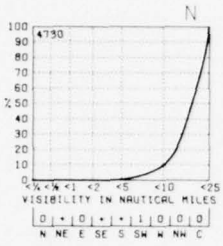
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

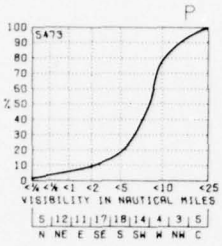
RED LINE - Percent frequency of visibilities <2 nautical miles

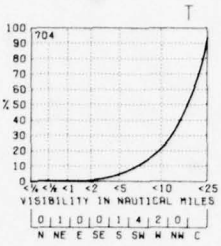
VISIBILITY

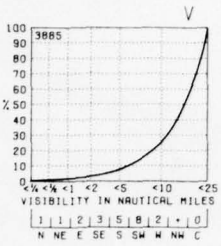

50° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1
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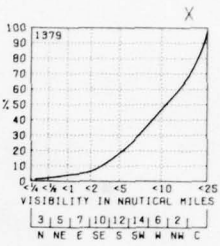
VISIBILITY

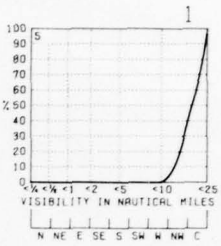


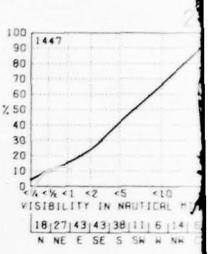


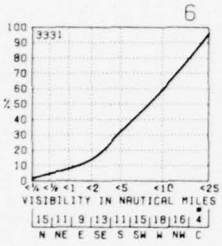


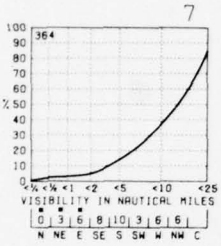


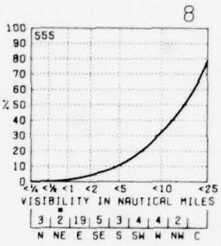


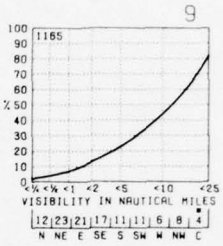


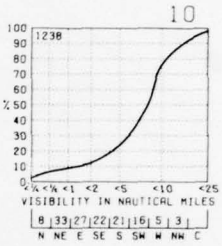


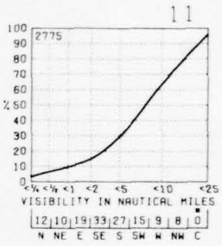


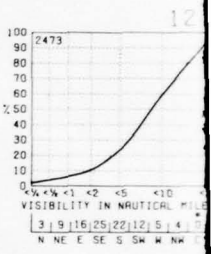


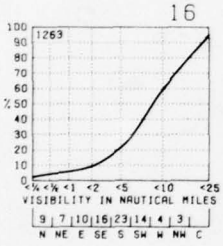


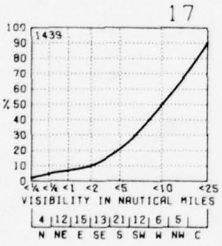


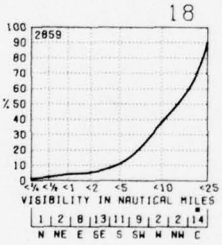


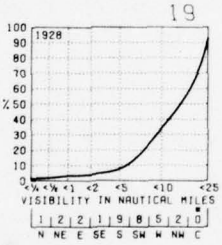


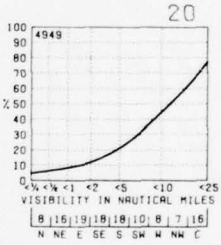


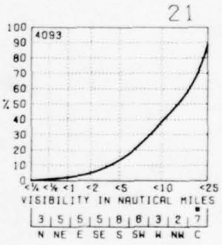


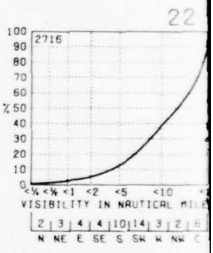


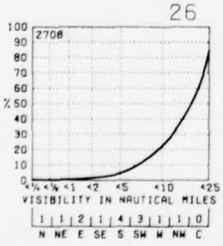


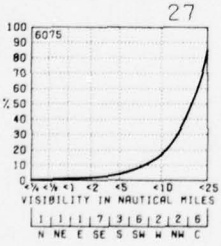


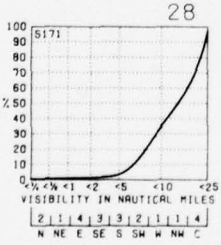


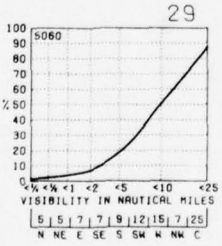


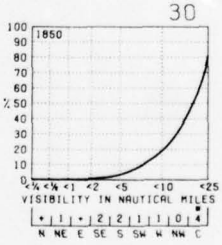


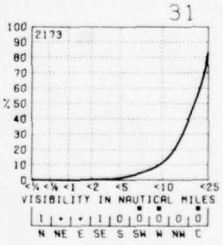


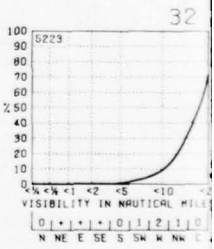


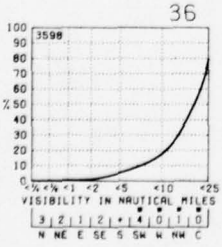


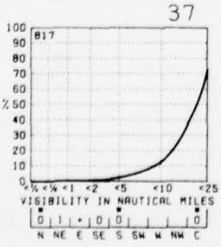


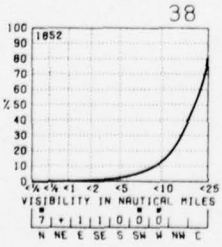


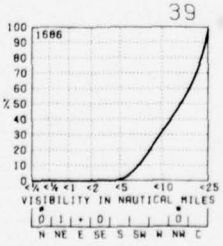


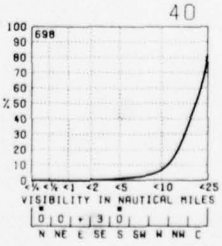


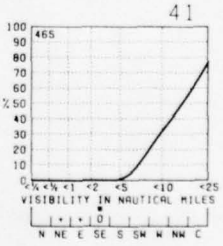


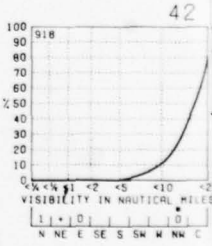






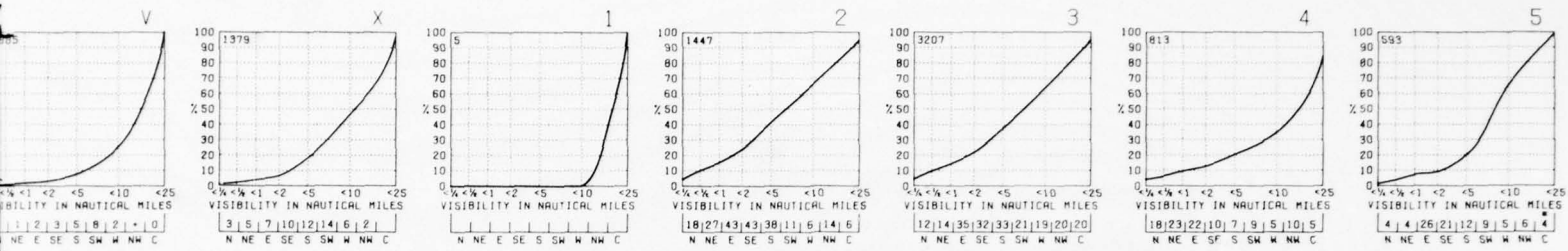


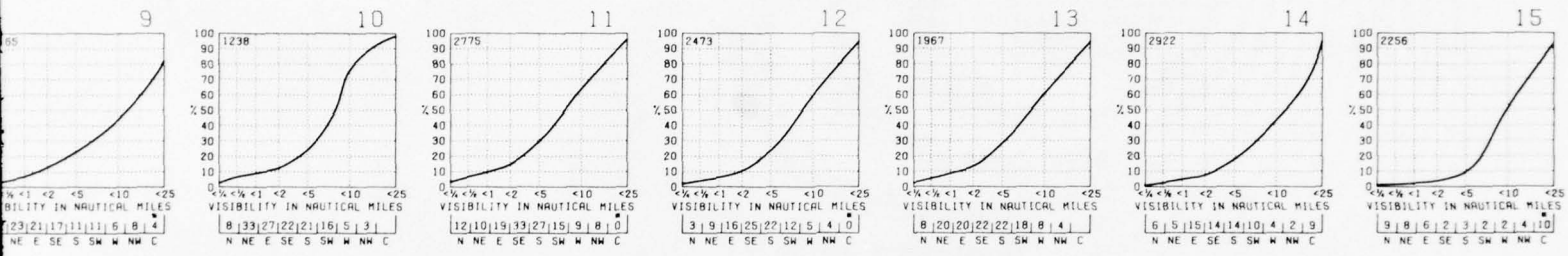


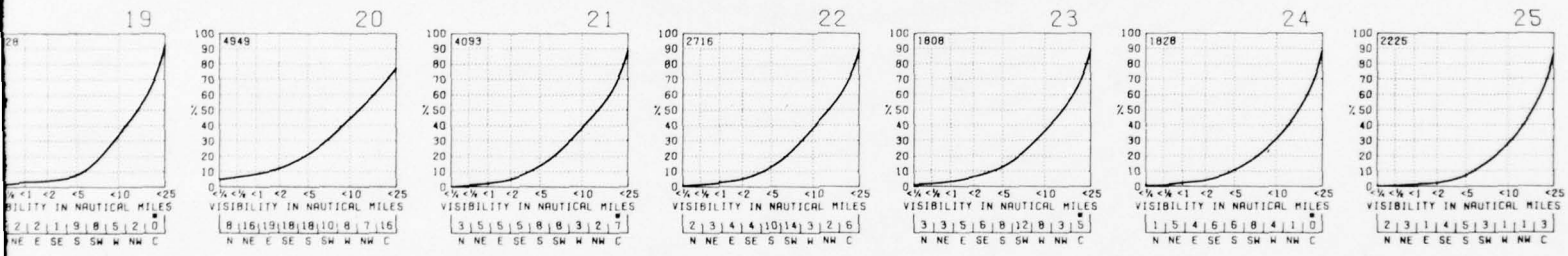


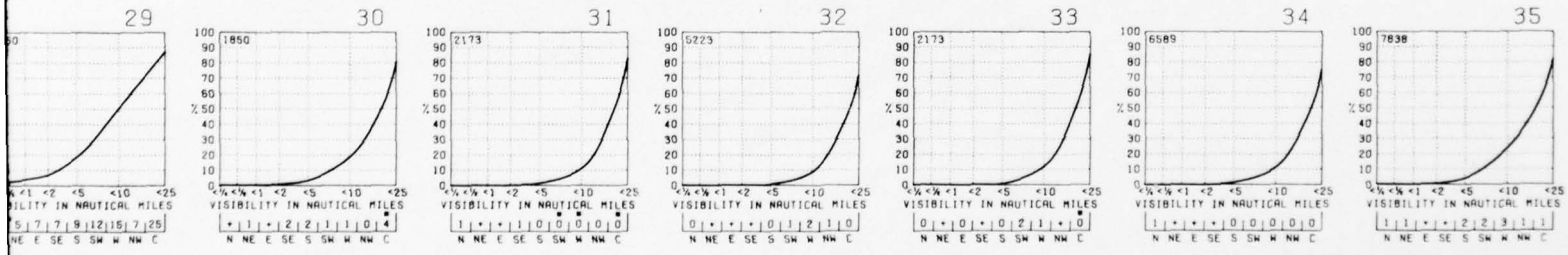
Graphs represent the objective compilation of available data for specified areas without regard to suspect
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias w

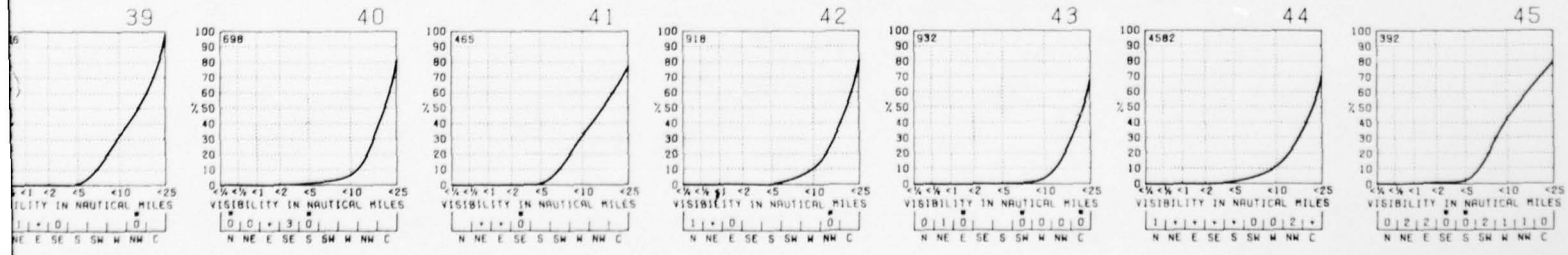
APRIL





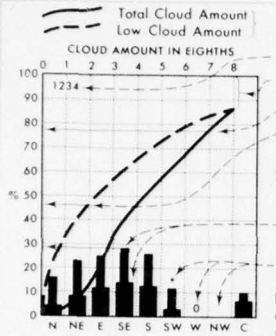






ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL



Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 ≥5/8 & ≥6/8 ≥7/8

Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

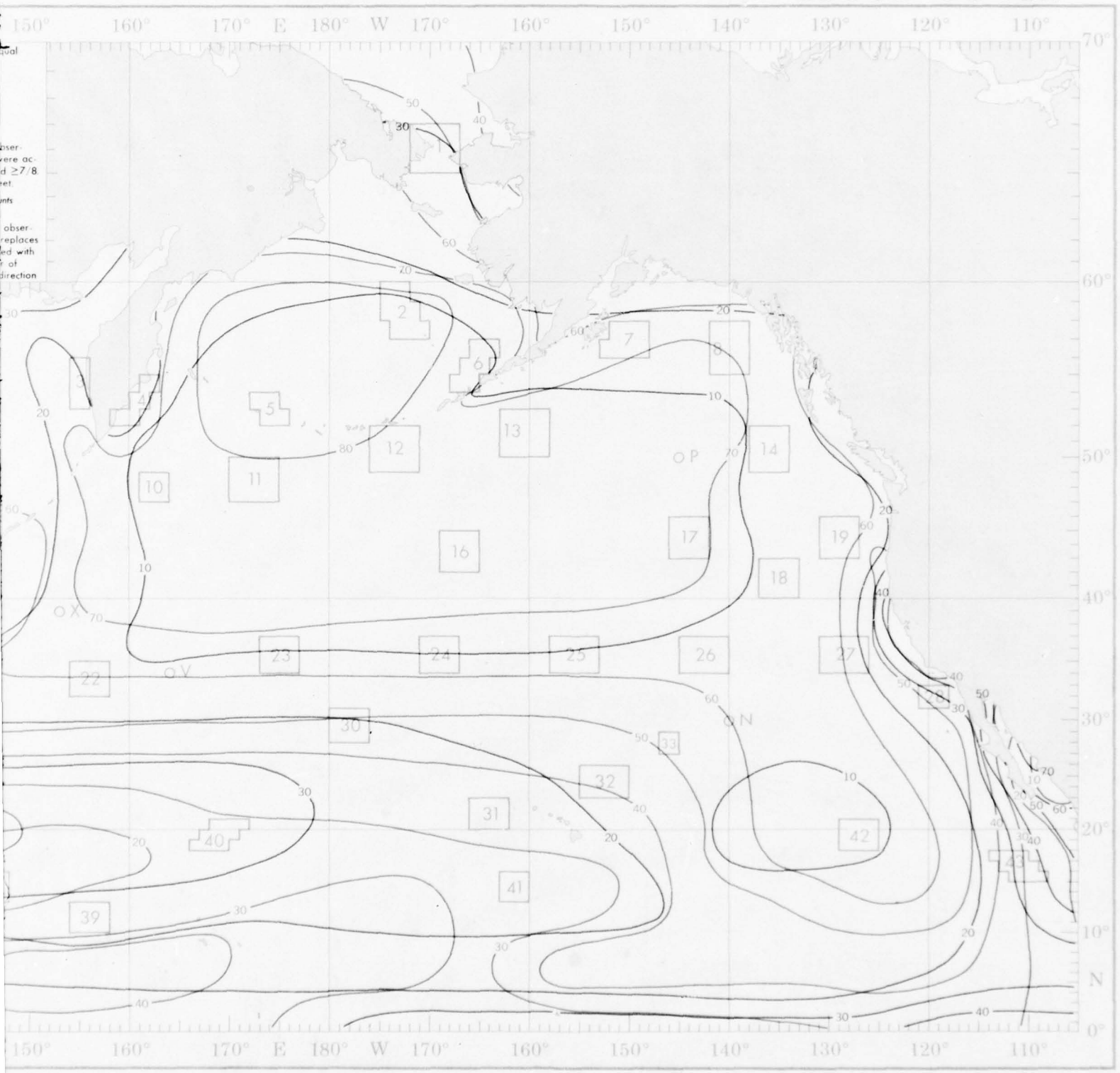
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

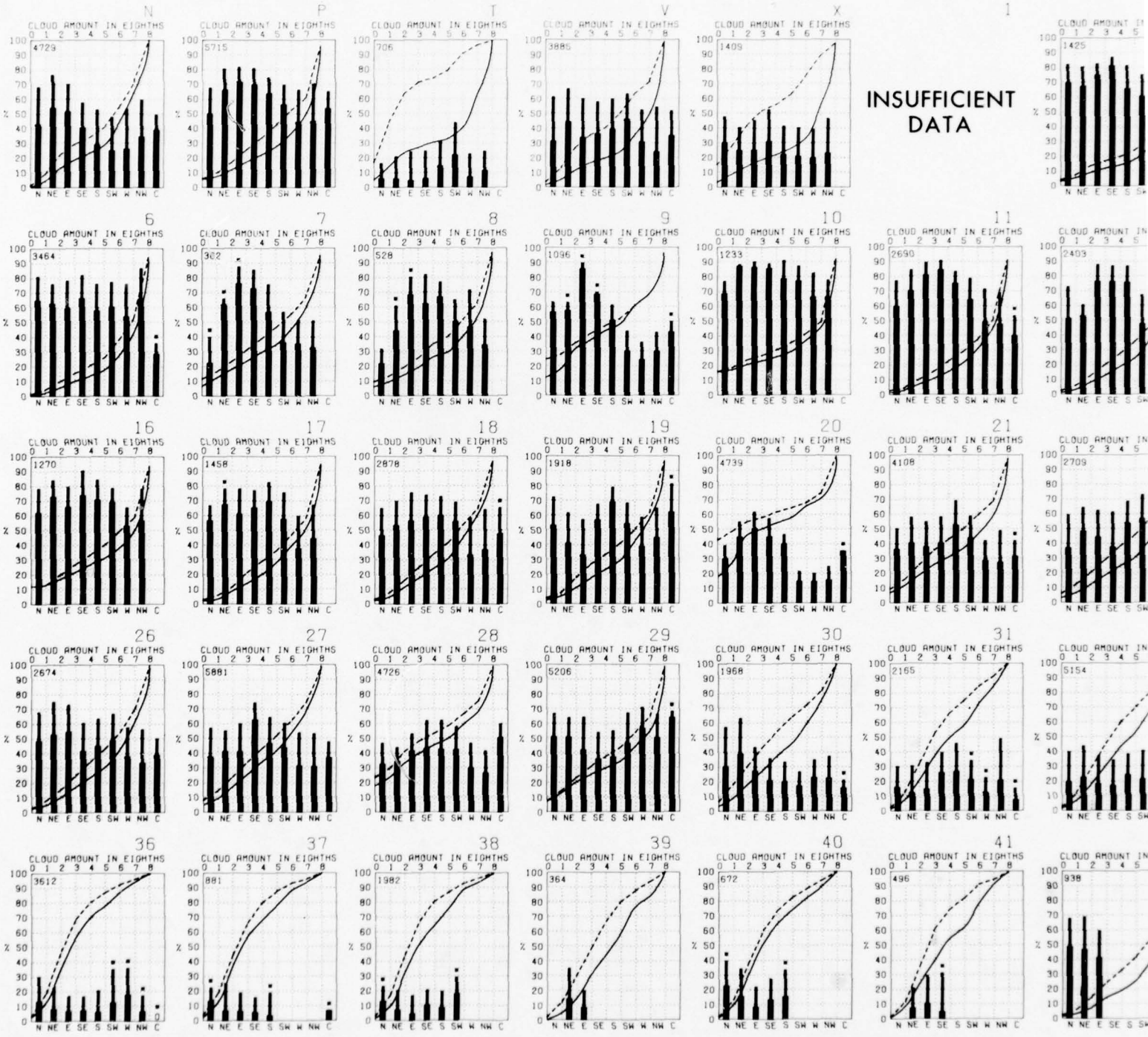
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

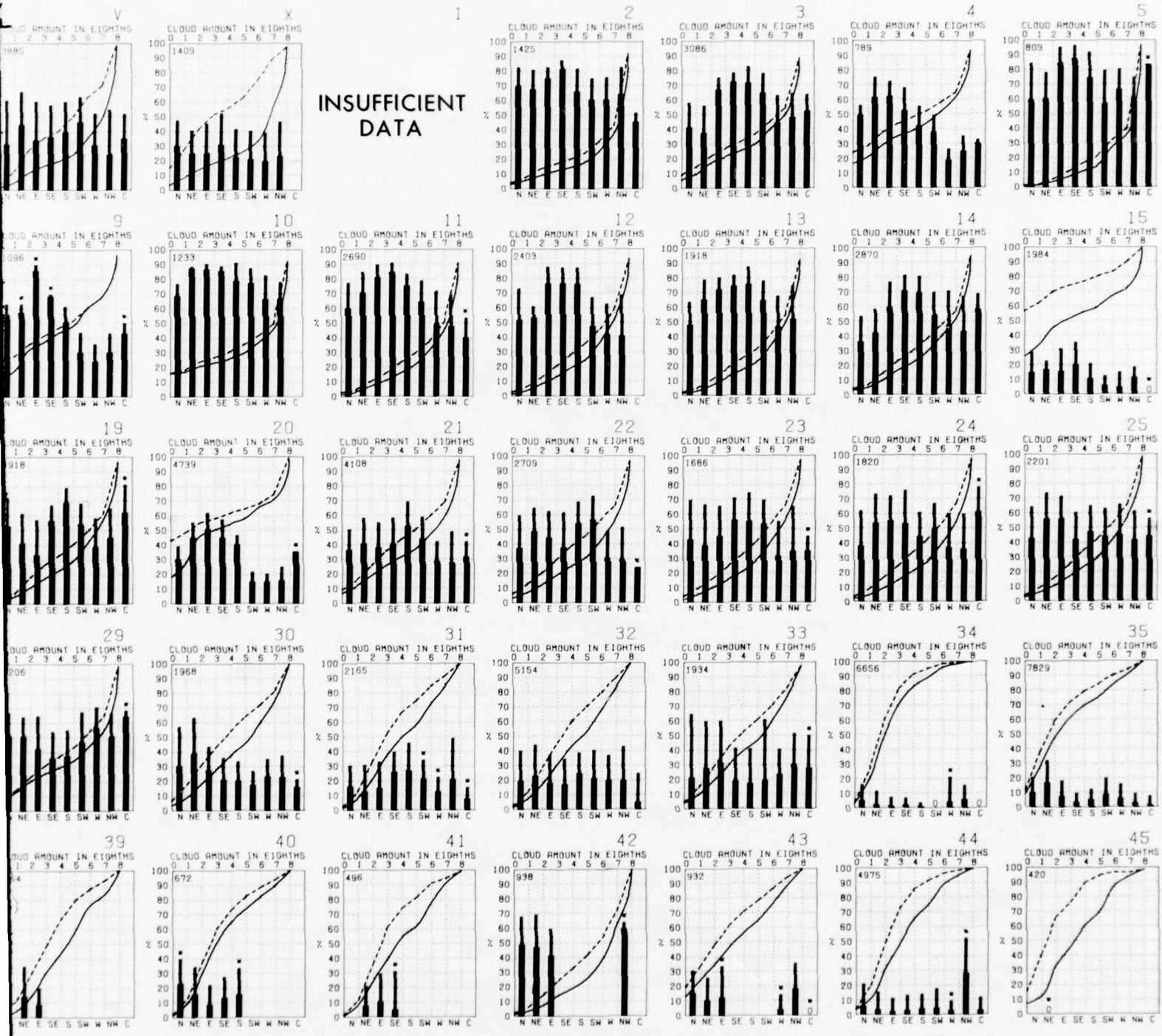

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 30 31 32 33 39 40 41 42
OP OX OV ON

CLOUD COVER



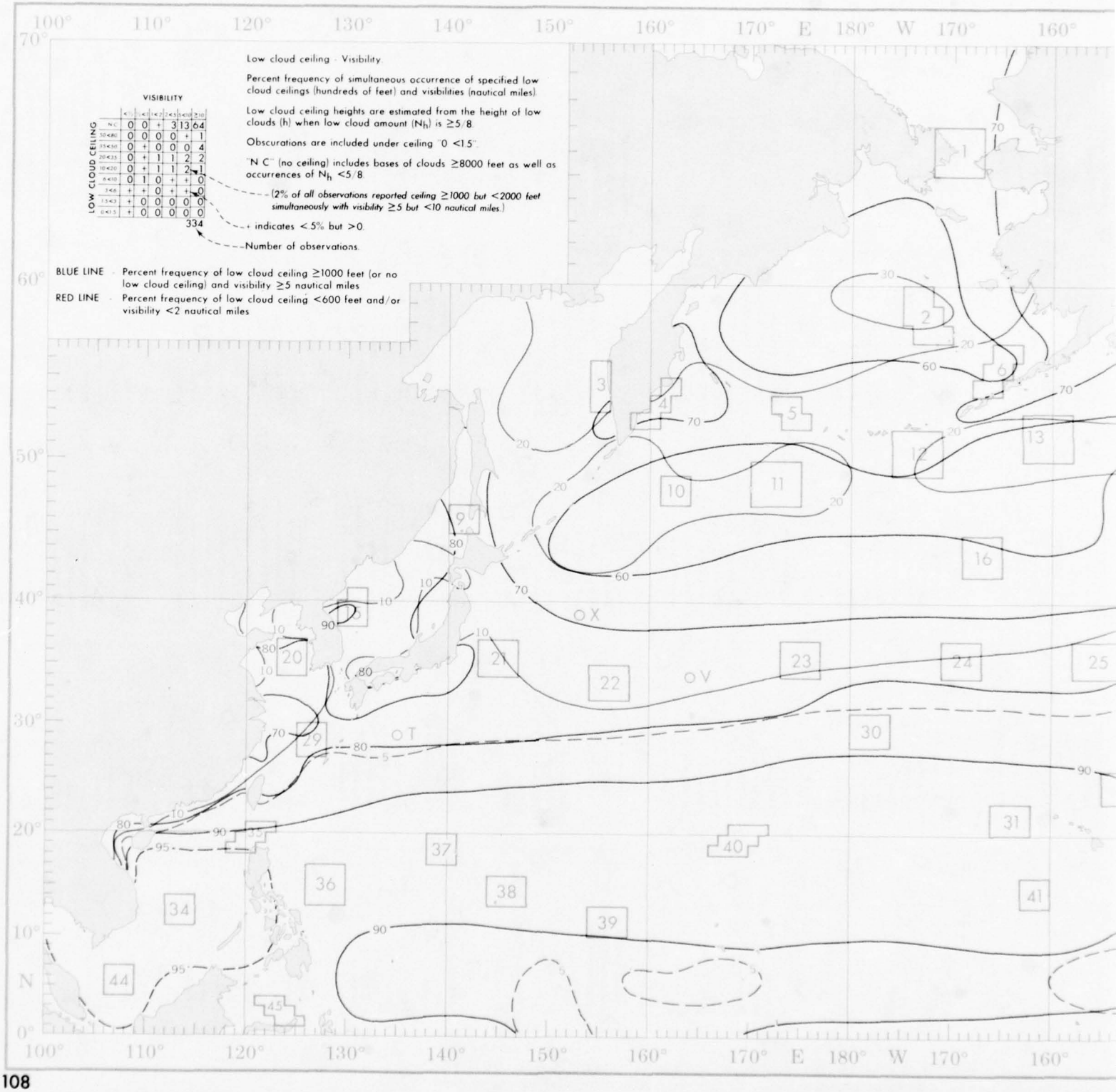
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APRIL

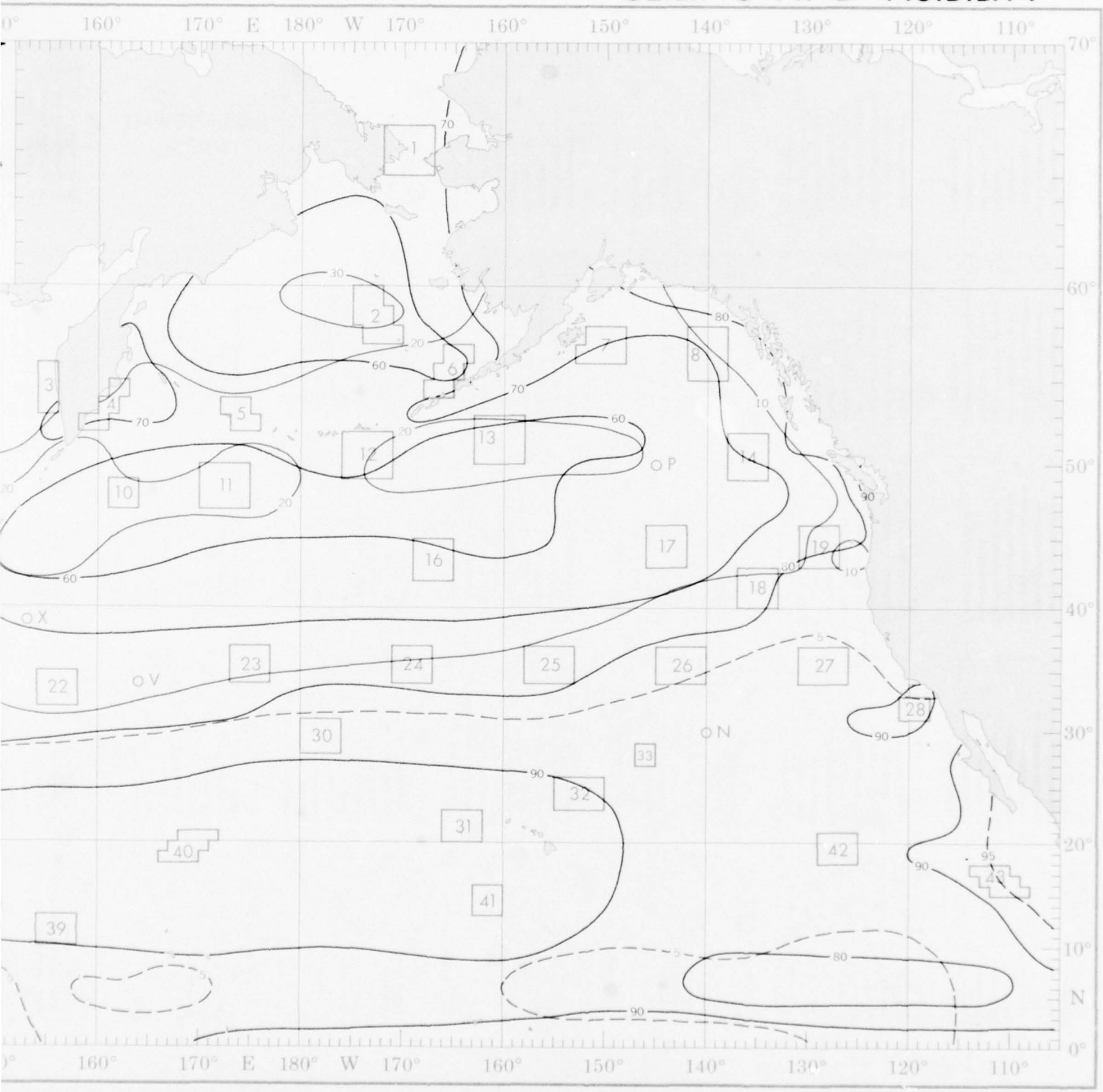


ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL


Low cloud ceiling - Visibility.
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <5% but >0.
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	2	32
50<80	0	0	0	+	+	1
35<50	0	0	0	0	1	6
20<35	0	0	0	+	4	46
10<20	0	0	+	+	2	5
6<10	0	+	+	+	+	+
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

4729

P

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	21	9
50<80	+	0	+	0	+	+
35<50	+	+	0	+	1	1
20<35	+	+	+	+	16	7
10<20	+	+	1	3	19	4
6<10	+	1	1	2	2	+
3<6	+	1	2	2	1	+
1.5<3	+	+	+	0	+	0
0<1.5	3	+	+	+	+	0

5470

T

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	6	66
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	0	0	0	2	5	7
10<20	0	+	+	1	4	1
6<10	0	0	0	+	1	0
3<6	0	0	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	0	0

703

V

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	5	37
50<80	0	+	0	0	+	1
35<50	0	0	+	+	1	4
20<35	0	0	+	+	3	24
10<20	+	+	+	2	6	7
6<10	+	+	+	1	2	1
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	+	0
0<1.5	1	+	+	+	+	0

3884

X

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	4	14	38
50<80	0	0	0	0	1	+
35<50	+	0	+	0	1	3
20<35	0	+	+	2	6	9
10<20	+	1	1	5	6	3
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	1	0	0	0	+

1376

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	40
50<80	0	0	0	0	0	20
35<50	0	0	0	0	0	40
20<35	0	0	0	0	0	0
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

5

LOW CLOUD CEILING	VISIBILITY
NC	1
50<80	0
35<50	0
20<35	+
10<20	+
6<10	+
3<6	2
1.5<3	2
0<1.5	5

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	5	16
50<80	0	0	+	+	+	1
35<50	+	+	+	+	2	3
20<35	+	0	+	1	3	5
10<20	+	+	2	6	11	12
6<10	+	1	2	5	5	5
3<6	+	+	1	1	+	1
1.5<3	+	+	+	+	+	+
0<1.5	3	2	1	1	+	+

2929

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	8	32
50<80	0	0	0	+	+	+
35<50	0	0	0	+	1	2
20<35	0	0	0	1	4	6
10<20	0	0	0	1	4	6
6<10	0	+	0	2	4	8
3<6	0	0	+	1	1	1
1.5<3	0	0	0	1	+	+
0<1.5	3	+	1	1	0	+

303

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	2	34
50<80	0	0	0	0	0	1
35<50	0	0	0	+	1	2
20<35	0	0	0	1	2	8
10<20	0	+	+	2	6	16
6<10	0	+	1	1	5	10
3<6	0	0	0	1	2	2
1.5<3	0	0	0	1	1	+
0<1.5	0	1	1	1	1	+

400

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	1	6	42
50<80	0	+	+	+	+	1
35<50	+	+	0	1	1	4
20<35	+	0	1	1	5	8
10<20	+	1	1	2	4	5
6<10	+	0	+	1	+	+
3<6	+	0	0	+	+	0
1.5<3	0	+	0	0	+	+
0<1.5	2	2	1	1	2	+

425

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	8
50<80	0	0	0	+	+	0
35<50	0	0	0	0	1	1
20<35	0	+	+	1	21	6
10<20	+	1	1	5	15	6
6<10	1	+	1	4	5	2
3<6	1	1	+	1	1	+
1.5<3	+	0	+	+	+	0
0<1.5	5	1	1	1	1	0

1104

11

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	6	15
50<80	0	0	0	+	+	+
35<50	0	+	0	+	+	1
20<35	+	+	+	1	4	5
10<20	+	+	1	5	11	11
6<10	1	+	1	4	7	5
3<6	+	+	1	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	6	1	2	2	1	+

1949

LOW CLOUD CEILING	VISIBILITY
NC	+
50<80	0
35<50	0
20<35	+
10<20	+
6<10	+
3<6	+
1.5<3	0
0<1.5	4

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	1	12	14
50<80	0	0	0	0	1	1
35<50	0	0	0	0	1	1
20<35	+	0	+	1	9	9
10<20	0	+	1	5	8	10
6<10	+	+	1	3	5	4
3<6	+	+	1	1	1	1
1.5<3	0	0	0	1	+	+
0<1.5	2	1	+	1	1	+

1019

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	23
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	2
20<35	0	+	0	1	4	7
10<20	0	+	1	2	8	14
6<10	+	+	+	2	6	8
3<6	+	+	+	1	2	1
1.5<3	0	0	0	0	+	0
0<1.5	4	1	1	+	1	0

911

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	5	29
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	0	+	+	+	5	16
10<20	+	+	+	1	9	15
6<10	0	+	+	1	3	6
3<6	+	0	+	+	1	1
1.5<3	0	0	+	+	+	+
0<1.5	2	1	+	+	1	+

2045

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	5	27
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	4	17
10<20	+	0	+	1	8	16
6<10	+	0	+	1	4	5
3<6	+	+	+	+	1	1
1.5<3	0	0	0	+	+	+
0<1.5	2	1	+	+	+	0

1639

20

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	13	49
50<80	+	0	0	+	2	1
35<50	0	0	+	+	1	1
20<35	0	0	0	1	2	3
10<20	+	+	+	1	3	2
6<10	+	0	+	1	2	1
3<6	+	+	+	1	1	1
1.5<3	+	0	+	0	0	+
0<1.5	6	1	1	+	+	0

555

21

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	38
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	2
20<35	0	+	+	1	3	7
10<20	+	+	+	2	6	12
6<10	+	+	1	2	4	5
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	1	1	+

2970

LOW CLOUD CEILING	VISIBILITY
NC	+
50<80	0
35<50	0
20<35	+
10<20	+
6<10	+
3<6	+
1.5<3	0
0<1.5	1

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	33
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	3
20<35	0	0	0	+	2	12
10<20	+	0	0	1	4	23
6<10	+	0	+	1	3	9
3<6	0	+	+	+	1	2
1.5<3	0	0	+	+	0	+
0<1.5	+	+	+	+	+	+

1933

27

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	2	41
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	3
20<35	+	+	+	+	2	13
10<20	0	+	0	+	1	3	19
6<10	+	0	+	+	2	8
3<6	0	0	+	+	1	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	+

4546

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	14	41
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	0	0	0	+	4	11
10<20	+	0	0	+	8	11
6<10	+	0	+	1	3	2
3<6	+	+	0	+	1	+
1.5<3	0	+	0	0	+	+
0<1.5	1	+	+	+	+	0

4073

29

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	2	10	27
50<80	0	0	+	0	+	1
35<50	0	+	0	+	1	1
20<35	0	+	+	1	4	6
10<20	+	+	1	4	11	9
6<10	+	+	+	3	6	4
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	+	+	1	+	+

2717

30

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	52
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	3
20<35	+	0	0	0	2	8
10<20	0	0	+	1	3	14
6<10	0	0	+	1	3	7
3<6	0	0	+	+	+	1
1.5<3	0	+	0	+	+	+
0<1.5	+	+	+	0	+	+

1436

31

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	4	63
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	8
10<20	0	0	0	+	2	11
6<10	0	0	+	+	1	5
3<6	0	0	0	+	+	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	+	0	+	0

1796

LOW CLOUD CEILING	VISIBILITY
NC	0
50<80	0
35<50	0
20<35	0
10<20	+
6<10	0
3<6	0
1.5<3	0
0<1.5	0

36

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	2	7	72
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	+
20<35	0	0	0	+	1	2
10<20	0	0	+	1	2	4
6<10	0	+	+	1	2	2
3<6	0	+	+	+	1	+
1.5<3	0	0	0	+	+	+
0<1.5	+	0	+	+	+	+

2981

37

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	5	75
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	2
10<20	0	0	0	1	1	6
6<10	0	0	0	+	1	3
3<6	0	0	0	+	1	+
1.5<3	+	0	0	0	+	0
0<1.5	0	0	+	0	0	0

623

38

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	7	74
50<80	0	0	0	0	0	+
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	4
10<20	0	0	+	+	2	5
6<10	0	0	0	+	1	2
3<6	+	+	+	+	+	+
1.5<3	0	0	0	+	0	+
0<1.5	0	0	+	0	0	+

1215

39

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	69
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	1	1	11
10<20	0	0	0	1	1	5
6<10	0	0	0	0	1	3
3<6	0	0	0	0	0	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

178

40

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	71
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	7
10<20	0	0	+	+	1	10
6<10	0	0	0	+	1	3
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

582

41

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	71
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	1
20<35	0	0	0	0	1	5
10<20	0	0	0	0	1	8
6<10	0	0	0	1	1	4
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

284

LOW CLOUD CEILING	VISIBILITY
NC	0
50<80	0
35<50	0
20<35	0
10<20	0
6<10	0
3<6	0
1.5<3	0
0<1.5	0

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

APRIL

V

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
	+	+	5	37		
	0	0	+	1		
	+	+	1	4		
	+	+	3	24		
	+	2	6	7		
	+	1	2	1		
	+	+	+	+		
	0	+	+	0		
	+	+	+	0		

3884

X

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	4	14	38
50<80	0	0	0	0	1	+
35<50	+	0	+	0	1	3
20<35	0	+	+	2	6	9
10<20	+	1	1	5	6	3
6<10	+	+	+	1	+	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	2	1	0	0	0	+

1376

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	40
50<80	0	0	0	0	0	20
35<50	0	0	0	0	0	40
20<35	0	0	0	0	0	0
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

5

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	+	+	1	5	14
50<80	0	+	+	+	1	1
35<50	0	0	0	+	1	1
20<35	+	1	3	8	10	9
10<20	+	1	1	2	2	1
6<10	+	1	2	2	2	1
3<6	2	1	1	1	1	+
1.5<3	2	1	0	+	0	0
0<1.5	5	1	2	1	1	0

1370

3

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	0	1	10	21
50<80	0	0	+	+	1	1
35<50	+	0	0	1	1	2
20<35	+	+	1	2	5	5
10<20	+	1	1	3	5	6
6<10	1	1	1	5	6	2
3<6	+	+	1	1	1	0
1.5<3	+	+	0	+	+	+
0<1.5	7	2	2	2	+	0

2425

4

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	4	47
50<80	0	0	0	+	1	3
35<50	0	0	+	+	1	3
20<35	+	1	1	1	4	10
10<20	+	1	+	1	2	5
6<10	+	+	0	+	+	1
3<6	+	1	+	+	+	+
1.5<3	+	+	0	+	0	+
0<1.5	5	1	1	+	+	+

709

5

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	7	10
50<80	0	0	0	0	+	1
35<50	0	0	0	1	4	1
20<35	0	+	1	2	14	13
10<20	1	1	1	3	17	10
6<10	0	+	0	1	3	1
3<6	+	+	0	+	1	+
1.5<3	+	+	0	0	0	0
0<1.5	3	+	0	1	1	0

541

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
	+	1	6	42		
	+	+	+	1		
	0	1	1	4		
	1	1	5	8		
	1	2	4	5		
	+	1	+	+		
	0	+	+	0		
	0	0	+	+		
	1	1	2	+		

425

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	8
50<80	0	0	0	+	+	0
35<50	0	0	0	0	1	1
20<35	0	+	+	1	21	6
10<20	+	1	1	5	16	6
6<10	1	+	1	4	5	2
3<6	1	1	+	1	1	+
1.5<3	+	0	+	+	+	0
0<1.5	5	1	1	1	1	0

1104

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	6	15
50<80	0	0	0	+	+	+
35<50	0	+	0	+	+	1
20<35	+	+	+	1	4	5
10<20	+	+	1	5	11	11
6<10	1	+	1	4	7	5
3<6	+	+	1	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	6	1	2	2	1	+

1949

12

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	8	19
50<80	0	0	0	+	+	+
35<50	0	0	+	+	1	2
20<35	+	0	+	1	4	5
10<20	+	+	1	4	10	12
6<10	+	1	1	4	6	4
3<6	+	+	1	1	2	1
1.5<3	0	0	1	+	+	+
0<1.5	4	1	1	2	1	+

1687

13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	2	6	18
50<80	0	0	0	0	+	+
35<50	0	+	+	+	1	1
20<35	+	0	+	1	3	5
10<20	+	1	1	6	10	11
6<10	+	1	1	4	7	5
3<6	+	+	+	1	2	1
1.5<3	0	0	+	+	+	+
0<1.5	5	1	1	1	1	+

1349

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	1	4	26
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	1
20<35	0	+	+	1	3	10
10<20	+	+	+	2	9	21
6<10	+	+	1	2	4	4
3<6	+	+	+	1	1	1
1.5<3	0	+	+	+	+	+
0<1.5	2	1	1	1	+	+

2248

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	56	28
50<80	0	0	0	+	1	+
35<50	0	0	0	+	2	+
20<35	+	0	+	+	3	1
10<20	0	0	0	1	2	1
6<10	+	0	+	+	+	+
3<6	0	0	0	0	+	0
1.5<3	+	0	0	+	0	0
0<1.5	1	+	0	0	0	0

358

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
	+	+	5	27		
	0	0	0	1		
	0	0	+	2		
	0	+	4	17		
	+	1	8	16		
	+	1	4	5		
	+	+	1	1		
	0	+	+	+		
	+	+	+	0		

1639

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	13	49
50<80	+	0	0	+	2	1
35<50	0	0	+	+	1	1
20<35	0	0	0	1	2	3
10<20	+	+	+	1	3	2
6<10	+	0	+	1	2	1
3<6	+	+	+	1	1	1
1.5<3	+	0	+	0	0	+
0<1.5	6	1	1	+	+	0

555

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	38
50<80	0	0	0	+	+	1
35<50	0	0	+	+	+	2
20<35	0	+	+	1	3	7
10<20	+	+	+	2	6	12
6<10	+	+	1	2	4	5
3<6	+	+	+	1	1	1
1.5<3	+	+	+	+	+	+
0<1.5	1	1	1	1	1	+

2970

22

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	+	5	34
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	2
20<35	+	0	+	1	3	8
10<20	+	+	+	2	6	13
6<10	+	+	1	2	5	6
3<6	+	+	+	1	2	1
1.5<3	0	+	+	+	1	+
0<1.5	1	1	1	1	1	+

2089

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	3	30
50<80	0	0	0	0	+	+
35<50	0	0	+	+	1	3
20<35	0	+	+	+	3	9
10<20	0	0	+	2	6	18
6<10	0	0	0	1	5	9
3<6	0	+	+	1	1	2
1.5<3	0	+	+	+	+	+
0<1.5	1	1	1	1	1	1

1245

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	1	3	31
50<80	0	0	+	0	+	1
35<50	0	0	0	+	1	3
20<35	0	0	0	+	1	10
10<20	0	0	+	2	7	18
6<10	0	+	+	2	4	8
3<6	0	+	+	+	1	1
1.5<3	0	0	0	+	+	+
0<1.5	1	1	1	+	+	1

1403

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	4	30
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	3
20<35	0	0	+	+	2	11
10<20	0	+	+	1	6	17
6<10	0	+	+	1	5	9
3<6	0	0	+	+	1	2
1.5<3	+	0	+	+	+	+
0<1.5	1	+	+	+	+	+

1716

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
	+	2	10	27		
	+	0	+	1		
	0	+	1	1		
	+	1	4	6		
	1	4	11	9		
	+	3	6	4		
	+	1	1	1		
	+	+	+	+		
	+	1	+	+		

2717

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	52
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	3
20<35	+	0	0	0	2	8
10<20	0	0	+	1	3	14
6<10	0	0	+	1	3	7
3<6	0	0	+	+	+	1
1.5<3	0	+	0	+	+	+
0<1.5	+	+	0	+	0	+

1436

31

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	4	63
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	8
10<20	0	0	+	+	2	11
6<10	0	0	+	+	1	5
3<6	0	0	0	+	+	1
1.5<3	0	+	0	+	+	+
0<1.5	0	0	+	0	+	0

1796

32

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	58
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	0	0	+	1	9
10<20	+	+	0	+	2	16
6<10	0	+	0	+	1	6
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	+	+
0<1.5	0	+	+	0	+	+

4036

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	0	1	49
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	5
20<35	0	0	0	+	3	17
10<20	0	0	0	+	1	13
6<10	0	0	0	+	1	4
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	+	+

1676

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	85
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	+
20<35	0	0	+	+	+	2
10<20	0	0	+	+	1	3
6<10	0	0	0	+	+	1
3<6	0	+	0	+	+	+
1.5<3	+	0	0	+	+	+
0<1.5	+	0	0	+	+	+

5417

35

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	12	66
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	+
20<35	0	0	0	1	2	3
10<20	0	+	+	1	3	5
6<10	+	0	+	1	2	2
3<6	0	0	+	+	+	+
1.5<3	0	0	0	+	+	0
0<1.5	+	+	+	+	+	+

6451

39

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
	0	0	2	69		
	0	0	0	1		
	0	0	0	1		
	0	1	1	11		
	1	1	1	5		
	0	1	1	3		
	0	0	0	2		
	0	0	0	0		
	0	0	0	0		

178

40

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	71
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	7
10<20	0	0	0	+	+	10
6<10	0	0	0	+	1	3
3<6	0	0	0	+	0	1
1.5<3	0	0	0	0	0	1
0<1.5	0	0	0	0	0	0

582

41

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	71
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	1
20<35	0	0	0	0	1	5
10<20	0	0	0	0	1	8
6<10	0	0	0	1	1	4
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

284

42

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	1	33
50<80	0	0	0	0	+	2
35<50	0	0	0	0	1	4
20<35	0	0	0	0	1	12
10<20	0	0	0	+	1	31
6<10	0	0	0	0	1	10
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	0	+
0<1.5	+	+	0	0	+	+

762

43

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	69
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	2
20<35	0	0	0	0	+	8
10<20	0	0	0	0	+	12
6<10	0	0	0	0	+	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	+	0	0	0

821

44

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	79
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	+	+	+	3
10<20	+	0	0	+	1	4
6<10	0	0	0	+	1	1
3<6	0	0	0	+	+	+
1.5<3	0	0	0	+	+	+
0<1.5	0	+	0	0	0	+

2407

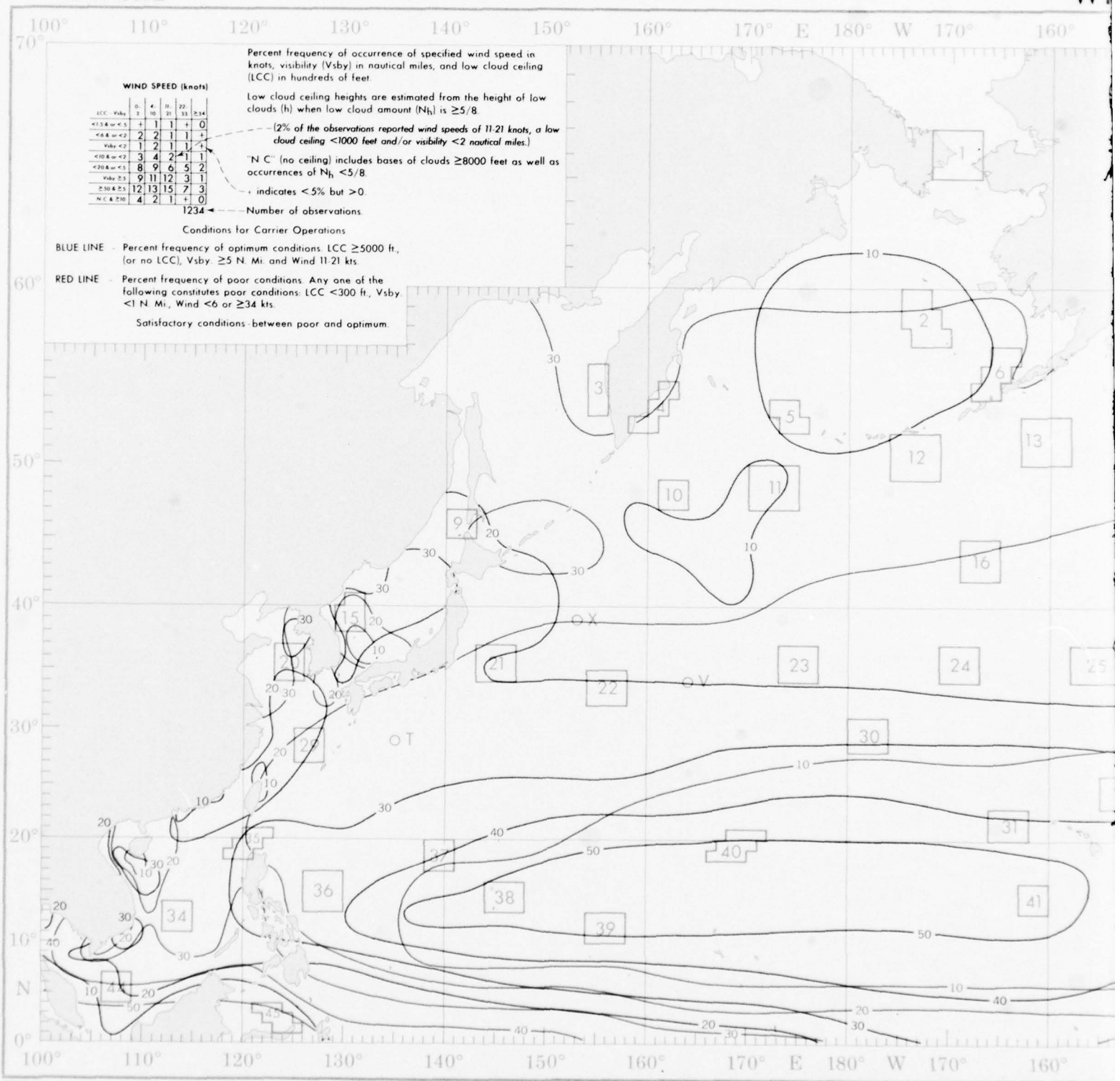
45

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	0	88
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	2
10<20	0	0	0	0	0	4
6<10	0	0	0	4	0	2
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

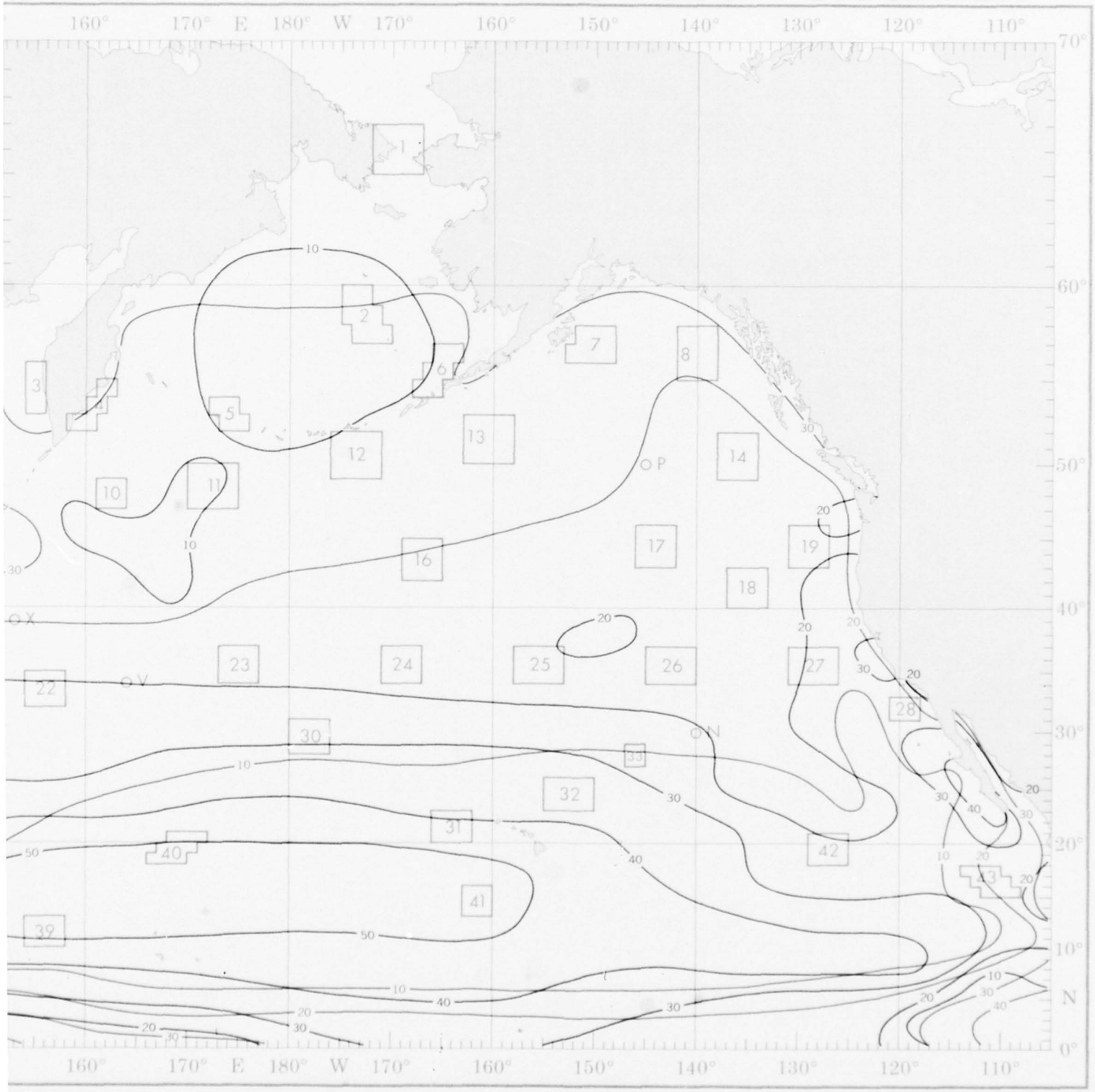
51

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL


WIND SPEED (knots)
LCC - Vsby
0-3
4-10
11-21
22-33
≥34
<1.5 & or <.5
1
1
+
0
<5 & or <2
2
2
1
1
+
Vsby <2
1
2
1
1
+
<10 & or <2
3
4
2
1
1
<20 & or <5
8
9
6
5
2
Vsby ≥5
9
11
12
3
1
≥50 & ≥5
12
13
15
7
3
N C & ≥10
4
2
1
+
0
1234
Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
+ indicates <.5% but >0.
Number of observations.
Conditions for Carrier Operations
BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.
RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.
Satisfactory conditions-between poor and optimum.
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	0	+	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	5	1	+
VSBY ≥5	6	31	53	8	+
≥50 & ≥5	3	13	17	2	+
NC & ≥10	3	12	15	2	+

4726

P

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	5	4	1
VSBY <2	+	2	4	3	1
<10 & OR <2	+	3	7	6	2
<20 & OR <5	1	5	17	17	5
VSBY ≥5	2	13	32	28	6
≥50 & ≥5	1	6	12	10	2
NC & ≥10	+	1	4	3	1

5465

T

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	+	+
VSBY <2	0	0	+	+	+
<10 & OR <2	0	0	1	1	+
<20 & OR <5	1	1	4	4	1
VSBY ≥5	3	18	50	23	1
≥50 & ≥5	2	16	40	16	+
NC & ≥10	2	14	36	14	+

702

V

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	1	2	1	+
<10 & OR <2	+	2	4	2	+
<20 & OR <5	1	4	12	7	1
VSBY ≥5	5	24	47	16	1
≥50 & ≥5	2	13	22	6	+
NC & ≥10	2	12	19	4	+

3879

X

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	2	1	+
<6 & OR <2	0	1	3	2	2
VSBY <2	0	1	3	2	2
<10 & OR <2	+	1	4	2	2
<20 & OR <5	+	2	10	10	7
VSBY ≥5	2	10	34	29	6
≥50 & ≥5	1	8	24	16	3
NC & ≥10	1	7	18	9	2

1376

1

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	0	0
VSBY ≥5	0	75	25	0	0
≥50 & ≥5	0	50	0	0	0
NC & ≥10	0	50	0	0	0

4

6

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	4	3	1
<6 & OR <2	+	2	8	6	2
VSBY <2	+	1	6	4	2
<10 & OR <2	1	4	14	12	3
<20 & OR <5	1	9	30	20	4
VSBY ≥5	2	16	34	17	2
≥50 & ≥5	1	7	10	4	+
NC & ≥10	1	5	7	2	+

2873

7

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	3	2	+	1
<6 & OR <2	+	4	4	1	2
VSBY <2	+	2	2	0	1
<10 & OR <2	+	8	10	5	2
<20 & OR <5	+	14	19	10	4
VSBY ≥5	3	28	36	16	3
≥50 & ≥5	2	14	16	6	1
NC & ≥10	2	11	12	5	1

298

8

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	2	1	1
<6 & OR <2	+	3	4	2	2
VSBY <2	0	+	1	1	1
<10 & OR <2	1	7	12	4	4
<20 & OR <5	1	14	25	8	5
VSBY ≥5	5	28	43	11	4
≥50 & ≥5	3	13	16	3	1
NC & ≥10	3	12	15	3	1

399

9

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	2	4	2	+
<6 & OR <2	1	4	5	4	1
VSBY <2	1	3	4	2	1
<10 & OR <2	1	4	7	4	1
<20 & OR <5	2	8	15	6	1
VSBY ≥5	5	24	38	13	3
≥50 & ≥5	3	15	23	8	2
NC & ≥10	2	13	20	6	1

323

10

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	3	4	1
<6 & OR <2	+	2	5	6	3
VSBY <2	+	1	4	4	3
<10 & OR <2	+	4	10	9	4
<20 & OR <5	1	8	23	19	6
VSBY ≥5	2	16	35	20	3
≥50 & ≥5	1	5	8	3	+
NC & ≥10	1	2	4	1	+

1102

11

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	3	5	4	2
<6 & OR <2	+	4	8	6	4
VSBY <2	+	3	5	4	3
<10 & OR <2	+	7	13	11	5
<20 & OR <5	1	13	26	20	8
VSBY ≥5	2	16	30	18	4
≥50 & ≥5	1	5	11	5	1
NC & ≥10	1	4	8	3	1

1944

16

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	2	3	1	+
<6 & OR <2	+	3	7	4	1
VSBY <2	+	2	4	2	1
<10 & OR <2	+	4	12	8	3
<20 & OR <5	+	8	22	17	4
VSBY ≥5	1	15	37	23	4
≥50 & ≥5	+	7	12	7	1
NC & ≥10	+	4	6	3	+

1017

17

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	2	4	1	+
<6 & OR <2	+	4	7	3	1
VSBY <2	+	3	4	1	+
<10 & OR <2	1	7	14	7	1
<20 & OR <5	1	13	27	15	2
VSBY ≥5	2	20	40	20	2
≥50 & ≥5	1	8	15	5	1
NC & ≥10	1	6	12	3	1

909

18

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	+	0
<6 & OR <2	+	2	3	1	+
VSBY <2	+	1	2	+	+
<10 & OR <2	1	4	8	4	1
<20 & OR <5	1	11	20	10	1
VSBY ≥5	3	26	44	18	1
≥50 & ≥5	1	11	18	5	+
NC & ≥10	1	9	15	4	+

2042

19

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	+	0
<6 & OR <2	+	2	4	1	+
VSBY <2	+	1	2	+	0
<10 & OR <2	1	5	9	4	+
<20 & OR <5	1	9	21	10	1
VSBY ≥5	3	23	47	17	2
≥50 & ≥5	1	9	17	6	+
NC & ≥10	1	8	14	4	+

1636

20

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	2	6	2	0	0
<6 & OR <2	2	8	4	+	+
VSBY <2	2	6	4	+	0
<10 & OR <2	2	10	5	1	+
<20 & OR <5	3	12	10	2	+
VSBY ≥5	10	37	31	4	+
≥50 & ≥5	8	30	24	3	+
NC & ≥10	6	25	17	2	0

545

21

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	1	4	4	1
VSBY <2	+	1	1	2	1
<10 & OR <2	+	3	8	7	2
<20 & OR <5	1	8	18	13	3
VSBY ≥5	2	23	41	18	3
≥50 & ≥5	2	15	21	6	1
NC & ≥10	2	13	18	5	+

2952

26

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	2	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	1	6	8	3	1
<20 & OR <5	2	15	21	7	1
VSBY ≥5	6	33	45	12	1
≥50 & ≥5	3	14	16	3	+
NC & ≥10	3	12	15	3	+

1928

27

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	+	1	+	+	+
<10 & OR <2	1	4	7	3	+
<20 & OR <5	2	10	19	7	1
VSBY ≥5	4	27	48	16	2
≥50 & ≥5	2	13	21	7	1
NC & ≥10	2	12	20	7	1

4536

28

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	+	1	+	0	0
<10 & OR <2	1	4	4	+	+
<20 & OR <5	2	11	13	2	+
VSBY ≥5	5	34	48	10	1
≥50 & ≥5	3	18	27	7	+
NC & ≥10	2	12	21	5	+

4044

29

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	1	3	5	1	+
VSBY <2	+	2	2	+	+
<10 & OR <2	1	6	12	3	+
<20 & OR <5	2	14	27	7	1
VSBY ≥5	3	29	42	7	1
≥50 & ≥5	2	16	17	2	+
NC & ≥10	1	12	12	1	+

2705

30

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	1	2	+	+
VSBY <2	+	+	+	+	0
<10 & OR <2	+	4	7	2	1
<20 & OR <5	1	8	16	5	1
VSBY ≥5	4	32	50	10	1
≥50 & ≥5	3	21	28	4	+
NC & ≥10	3	20	26	3	0

1432

31

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	2	4	1	+
<20 & OR <5	+	4	12	4	+
VSBY ≥5	4	27	56	11	1
≥50 & ≥5	3	20	38	6	+
NC & ≥10	3	19	36	6	+

1786

36

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	4	1	+
<20 & OR <5	+	7	9	1	+
VSBY ≥5	3	51	39	2	+
≥50 & ≥5	2	45	31	1	0
NC & ≥10	2	41	28	1	0

2968

37

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	5	+	0
<20 & OR <5	+	5	9	1	0
VSBY ≥5	5	40	49	4	0
≥50 & ≥5	4	35	39	2	0
NC & ≥10	4	32	37	2	0

621

38

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	0	1	1	+	+
VSBY <2	0	0	+	+	+
<10 & OR <2	+	1	3	1	1
<20 & OR <5	+	3	8	2	1
VSBY ≥5	2	25	65	6	+
≥50 & ≥5	1	22	54	4	+
NC & ≥10	1	21	49	3	+

1207

39

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	1	6	1	0
<20 & OR <5	0	1	11	3	0
VSBY ≥5	2	12	74	8	0
≥50 & ≥5	2	10	53	7	0
NC & ≥10	2	10	51	6	0

177

40

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	1	0
VSBY <2	0	0	0	+	0
<10 & OR <2	0	1	3	2	+
<20 & OR <5	+	3	11	4	+
VSBY ≥5	2	20	63	14	1
≥50 & ≥5	1	16	49	7	0
NC & ≥10	1	15	47	7	0

581

41

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	2	0
<20 & OR <5	0	2	11	4	0
VSBY ≥5	+	17	62	20	0
≥50 & ≥5	+	13	46	14	0
NC & ≥10	+	13	44	12	0

265

Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

V

D SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	+	+	1	+	+
	+	1	2	1	+
	+	1	2	1	+
	+	2	4	2	+
	1	4	12	7	1
	5	24	47	16	1
	2	13	22	6	+
	2	12	19	4	+

3879

X

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	1	+
<6 & OR <2	0	1	3	2	2
VSBY <2	0	1	3	2	2
<10 & OR <2	+	1	4	2	2
<20 & OR <5	+	2	10	10	7
VSBY ≥5	2	10	34	29	6
≥50 & ≥5	1	8	24	16	3
NC & ≥10	1	7	18	9	2

1376

1

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	0	0
VSBY ≥5	0	75	25	0	0
≥50 & ≥5	0	50	0	0	0
NC & ≥10	0	50	0	0	0

4

2

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	7	3	1
<6 & OR <2	1	5	14	6	2
VSBY <2	1	5	12	6	2
<10 & OR <2	1	7	16	8	2
<20 & OR <5	2	12	33	17	3
VSBY ≥5	4	16	27	10	1
≥50 & ≥5	2	7	8	2	+
NC & ≥10	1	6	5	2	+

1197

3

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	4	6	4	1
<6 & OR <2	2	6	9	7	1
VSBY <2	2	5	8	6	1
<10 & OR <2	4	9	14	9	1
<20 & OR <5	5	14	22	12	2
VSBY ≥5	6	24	25	8	1
≥50 & ≥5	3	13	12	3	+
NC & ≥10	2	9	7	2	0

2235

4

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	3	1	1
<6 & OR <2	1	4	5	2	1
VSBY <2	1	3	4	2	1
<10 & OR <2	1	4	6	2	1
<20 & OR <5	2	9	10	4	2
VSBY ≥5	13	31	29	10	1
≥50 & ≥5	11	20	17	6	+
NC & ≥10	10	18	14	6	+

598

5

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	2	+
<6 & OR <2	+	1	5	4	1
VSBY <2	+	1	4	3	1
<10 & OR <2	+	2	8	5	1
<20 & OR <5	4	10	22	11	3
VSBY ≥5	7	23	38	12	2
≥50 & ≥5	2	6	7	3	0
NC & ≥10	1	3	5	1	0

489

9

D SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	+	2	4	2	+
	1	4	5	4	1
	1	3	4	2	1
	1	4	7	4	1
	2	8	15	6	1
	5	24	38	13	3
	3	15	23	8	2
	2	13	20	6	1

323

10

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	4	1
<6 & OR <2	+	2	5	6	3
VSBY <2	+	1	4	4	3
<10 & OR <2	+	4	10	9	4
<20 & OR <5	1	8	23	19	6
VSBY ≥5	2	16	35	20	3
≥50 & ≥5	1	5	8	3	+
NC & ≥10	1	2	4	1	+

1102

11

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	5	4	2
<6 & OR <2	+	4	8	6	4
VSBY <2	+	3	5	4	3
<10 & OR <2	+	7	13	11	5
<20 & OR <5	1	13	26	20	8
VSBY ≥5	2	16	30	18	4
≥50 & ≥5	1	5	11	5	1
NC & ≥10	1	4	8	3	1

1944

12

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	3	1
<6 & OR <2	+	3	6	6	3
VSBY <2	+	1	3	4	2
<10 & OR <2	+	5	11	11	4
<20 & OR <5	1	12	24	19	6
VSBY ≥5	2	20	34	16	4
≥50 & ≥5	1	9	13	5	1
NC & ≥10	+	6	9	3	+

1457

13

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	5	2	1
<6 & OR <2	+	4	9	5	2
VSBY <2	+	3	6	3	1
<10 & OR <2	+	7	14	10	3
<20 & OR <5	1	12	29	18	5
VSBY ≥5	2	16	32	18	3
≥50 & ≥5	1	6	11	5	1
NC & ≥10	1	5	7	4	+

1342

14

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	2	+
<6 & OR <2	+	2	5	4	1
VSBY <2	+	1	3	2	+
<10 & OR <2	1	4	12	6	1
<20 & OR <5	1	10	29	13	3
VSBY ≥5	3	20	44	15	2
≥50 & ≥5	1	8	16	4	1
NC & ≥10	1	7	14	3	+

2184

15

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	2	1	0	0
VSBY <2	0	2	1	0	0
<10 & OR <2	0	3	1	+	0
<20 & OR <5	+	5	3	1	0
VSBY ≥5	5	34	45	10	+
≥50 & ≥5	4	30	41	9	+
NC & ≥10	2	10	12	3	0

955

19

D SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	+	1	2	+	0
	+	2	4	1	+
	+	1	2	+	0
	1	5	3	4	+
	1	9	21	10	1
	3	23	47	17	2
	1	9	17	6	+
	1	8	14	4	+

1636

20

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	6	2	0	0
<6 & OR <2	2	8	4	+	+
VSBY <2	2	6	4	+	0
<10 & OR <2	2	10	5	1	+
<20 & OR <5	3	12	10	2	+
VSBY ≥5	10	37	31	4	+
≥50 & ≥5	8	30	24	3	+
NC & ≥10	6	25	17	2	0

545

21

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	1	4	4	1
VSBY <2	+	1	1	2	1
<10 & OR <2	+	3	8	7	2
<20 & OR <5	1	8	18	13	3
VSBY ≥5	2	23	41	18	3
≥50 & ≥5	2	15	21	6	1
NC & ≥10	2	13	18	5	+

2952

22

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	3	1	+
<6 & OR <2	+	2	6	3	1
VSBY <2	+	1	2	1	+
<10 & OR <2	+	5	11	6	1
<20 & OR <5	1	10	22	10	2
VSBY ≥5	3	26	42	14	3
≥50 & ≥5	2	14	18	5	1
NC & ≥10	2	13	15	4	1

2078

23

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	1	+
<6 & OR <2	+	3	4	2	+
VSBY <2	+	1	1	1	+
<10 & OR <2	1	6	12	6	1
<20 & OR <5	1	14	25	10	1
VSBY ≥5	3	27	44	14	1
≥50 & ≥5	2	12	15	4	+
NC & ≥10	2	11	14	3	+

1238

24

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	4	2	1
VSBY <2	0	1	2	1	+
<10 & OR <2	1	6	10	5	1
<20 & OR <5	2	14	24	8	2
VSBY ≥5	4	30	43	12	2
≥50 & ≥5	2	14	16	4	1
NC & ≥10	1	13	13	3	+

1397

25

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	0
<6 & OR <2	+	2	4	2	+
VSBY <2	+	1	1	+	0
<10 & OR <2	+	5	11	4	1
<20 & OR <5	2	12	25	7	2
VSBY ≥5	4	28	48	11	2
≥50 & ≥5	2	11	18	4	+
NC & ≥10	1	10	15	3	+

1706

29

D SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	+	1	1	+	+
	1	3	5	1	+
	+	2	2	+	+
	1	6	12	3	+
	2	14	27	7	1
	3	29	42	7	1
	2	16	17	2	+
	1	12	12	1	+

2705

30

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	1	2	+	+
VSBY <2	+	+	+	+	0
<10 & OR <2	+	4	7	2	1
<20 & OR <5	1	8	16	5	1
VSBY ≥5	4	32	50	10	1
≥50 & ≥5	3	21	28	4	+
NC & ≥10	3	20	26	3	0

1432

31

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	2	4	1	+
<20 & OR <5	+	4	12	4	+
VSBY ≥5	4	27	56	11	1
≥50 & ≥5	3	20	38	6	+
NC & ≥10	3	19	36	6	+

1786

32

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	1	1	+
VSBY <2	0	0	+	+	+
<10 & OR <2	+	1	6	2	+
<20 & OR <5	+	4	17	5	+
VSBY ≥5	2	22	61	13	+
≥50 & ≥5	2	15	37	6	+
NC & ≥10	2	15	36	6	+

4017

33

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	1	+	+
VSBY <2	+	0	0	0	0
<10 & OR <2	+	1	4	1	+
<20 & OR <5	+	5	13	3	+
VSBY ≥5	3	34	54	8	+
≥50 & ≥5	3	21	25	3	0
NC & ≥10	2	20	24	3	0

1675

34

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	+	+	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	1	1	+	+
<20 & OR <5	+	3	3	+	+
VSBY ≥5	8	61	29	1	0
≥50 & ≥5	8	57	25	+	0
NC & ≥10	7	53	23	+	0

5399

35

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	1	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	1	3	1	+
<20 & OR <5	1	3	8	4	+
VSBY ≥5	8	37	41	9	+
≥50 & ≥5	8	34	32	5	+
NC & ≥10	7	29	27	4	+

6405

39

SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
	0	0	0	0	0
	0	1	2	1	0
	0	0	0	1	0
	0	1	6	1	0
	0	1	11	3	0
	2	12	74	8	0
	2	10	53	7	0
	2	10	51	6	0

177

40

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	1	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	3	2	+
<20 & OR <5	+	3	11	4	+
VSBY ≥5	2	20	63	14	1
≥50 & ≥5	1	16	49	7	0
NC & ≥10	1	15	47	7	0

581

41

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	2	0
<20 & OR <5	0	2	11	4	0
VSBY ≥5	+	17	62	20	0
≥50 & ≥5	+	13	46	14	0
NC & ≥10	+	13	44	12	0

265

42

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	+	2	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	3	10	1	+
<20 & OR <5	1	12	30	4	+
VSBY ≥5	2	26	65	6	+
≥50 & ≥5	1	9	24	1	0
NC & ≥10	1	9	22	1	0

757

43

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	4	2	0	0
<20 & OR <5	1	10	8	0	0
VSBY ≥5	7	56	37	+	0
≥50 & ≥5	5	42	25	+	0
NC & ≥10	5	41	23	+	0

815

44

WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	+	+	+	0	0
<10 & OR <2	+	2	1	0	0
<20 & OR <5	2	6	3	+	0
VSBY ≥5	24	58	16	+	0
≥50 & ≥5	22	51	13	+	0
NC & ≥10	20	47	11	+	0

2385

45

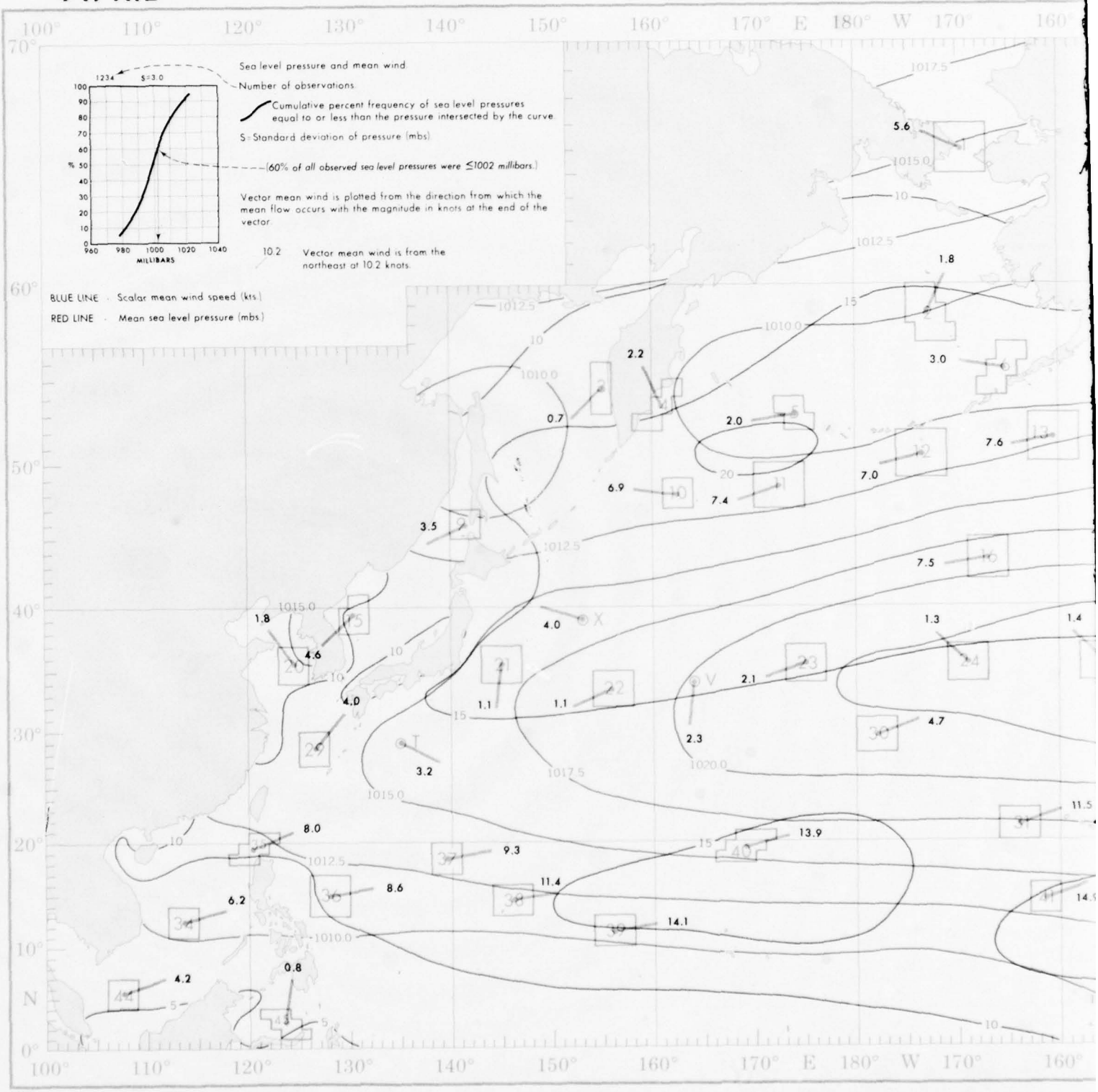
WIND SPEED (KNOTS) LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	6	0	0	0
<20 & OR <5	2	6	2	0	0
VSBY ≥5	35	47	14	0	0
≥50 & ≥5	33	43	12	0	0
NC & ≥10	33	43	12	0	0

51

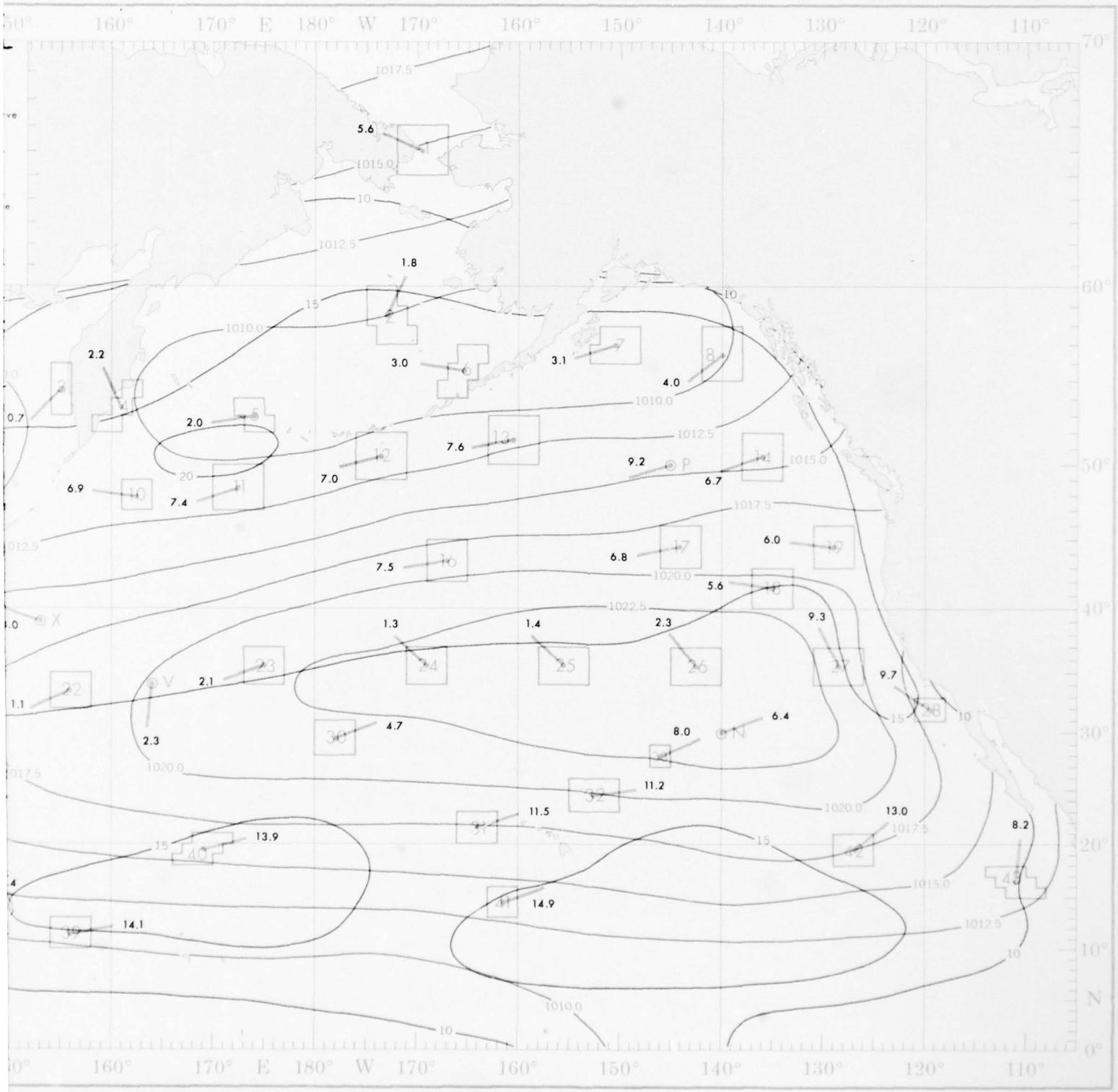
ıe objective compilation of available data for specified areas without regard to suspected biases.
ıs (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

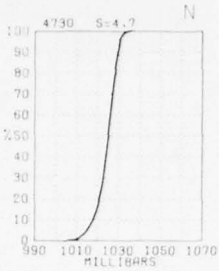
SEA LEVEL

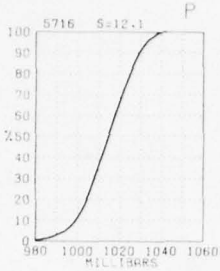


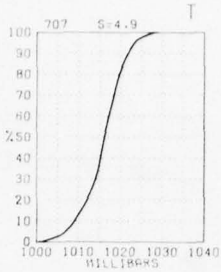
SEA LEVEL PRESSURE AND MEAN WIND

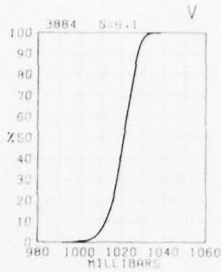


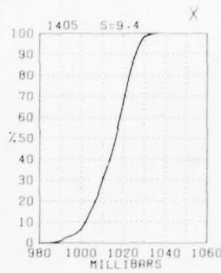
SEA LEVEL PRESSURE





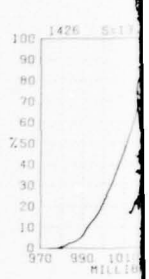


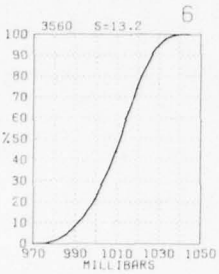


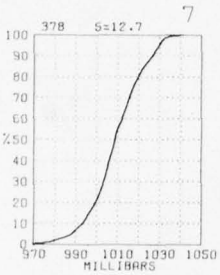


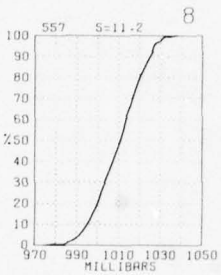
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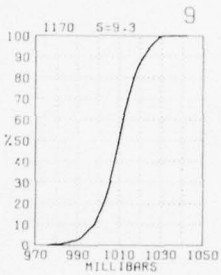
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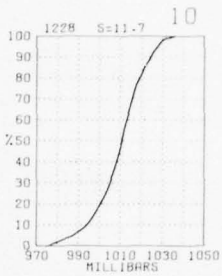


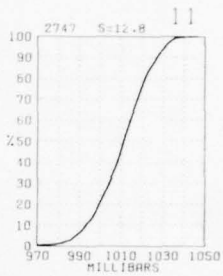


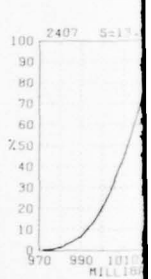


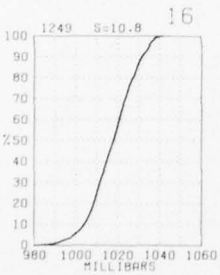


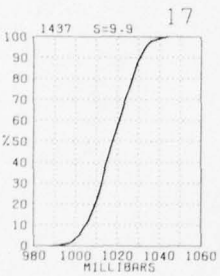


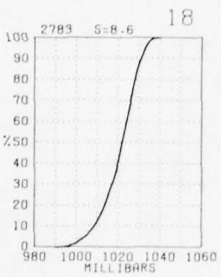


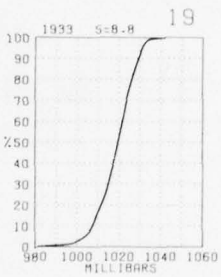


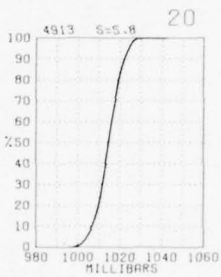


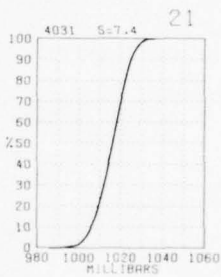


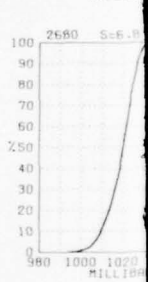


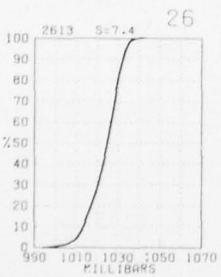


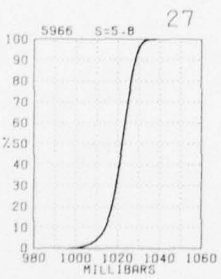


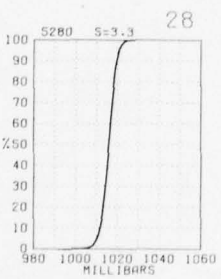


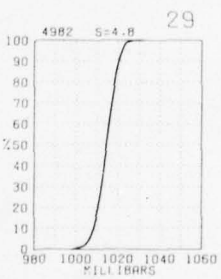


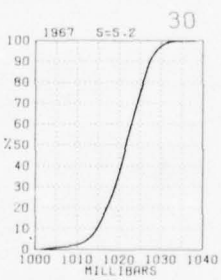


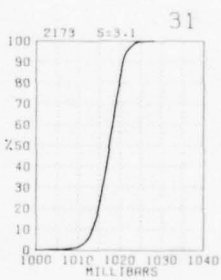


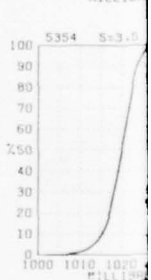


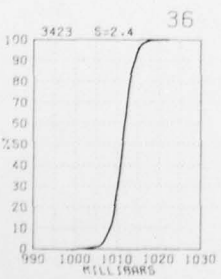


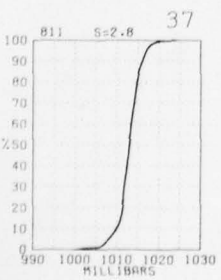


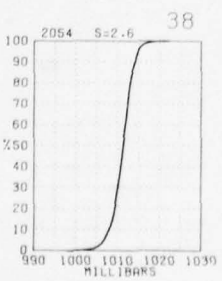


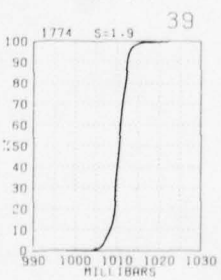


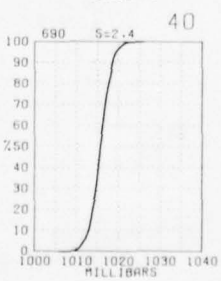


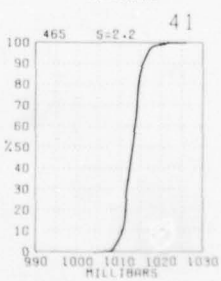


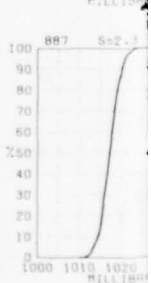






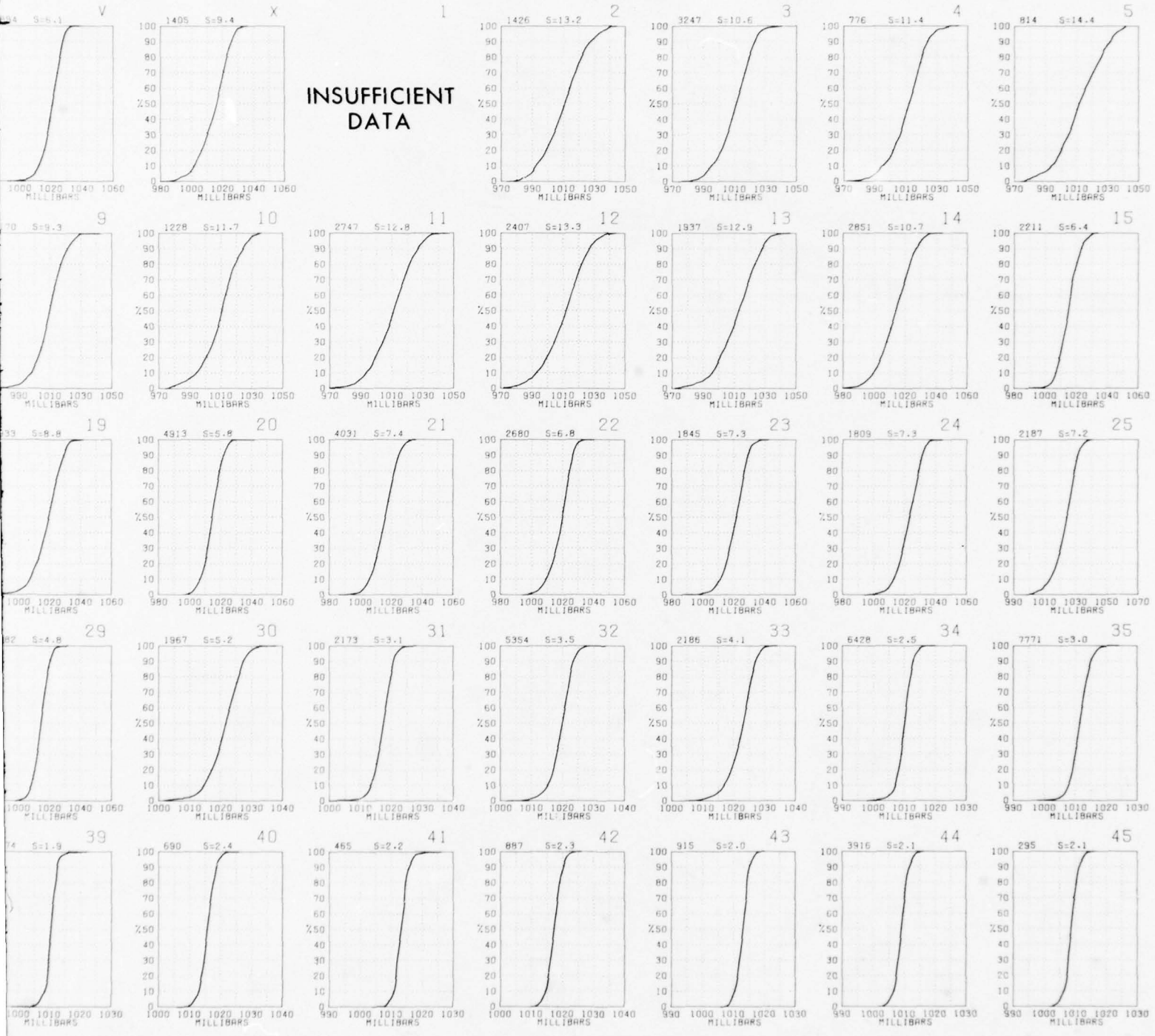






Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

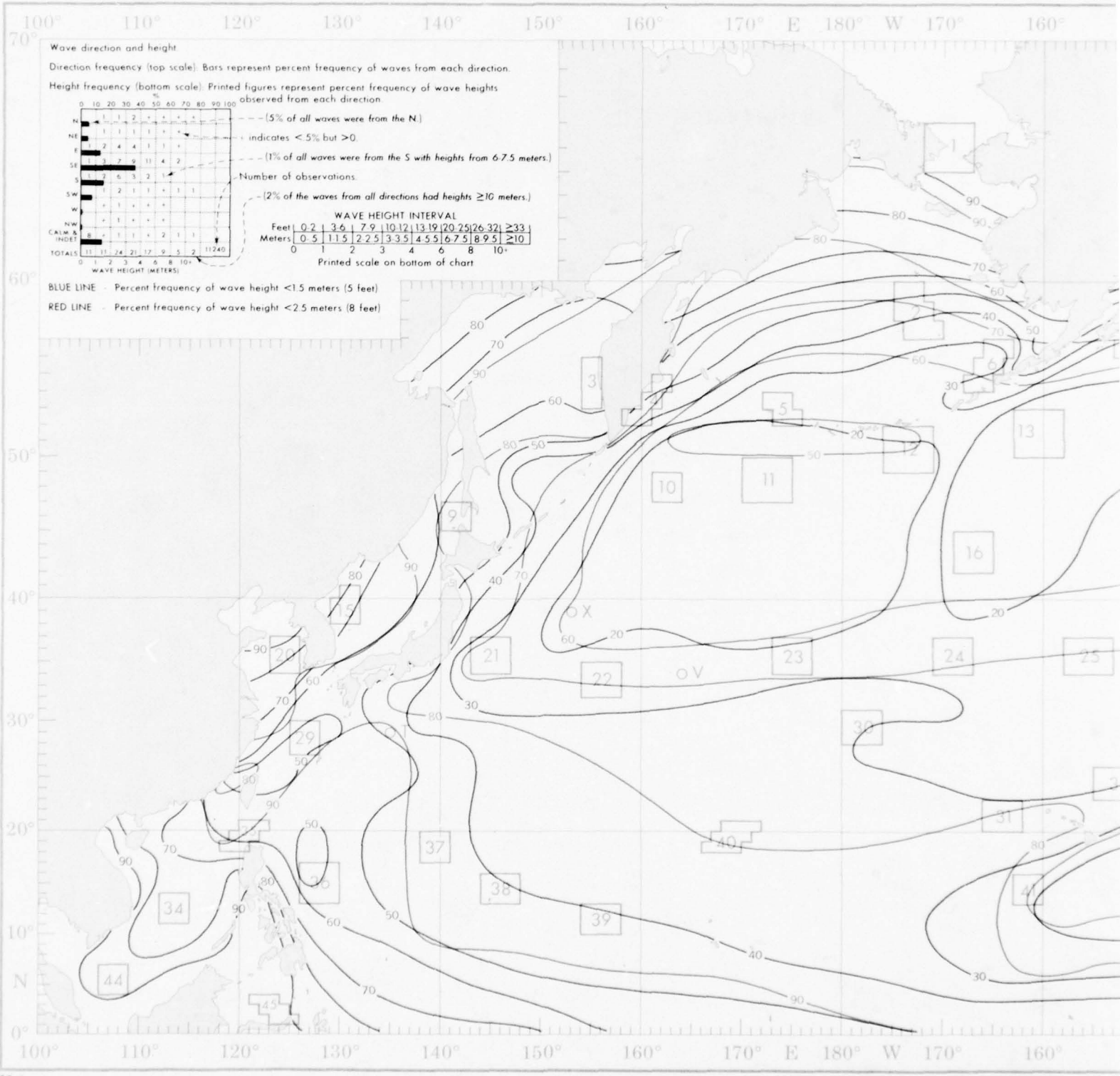
APRIL



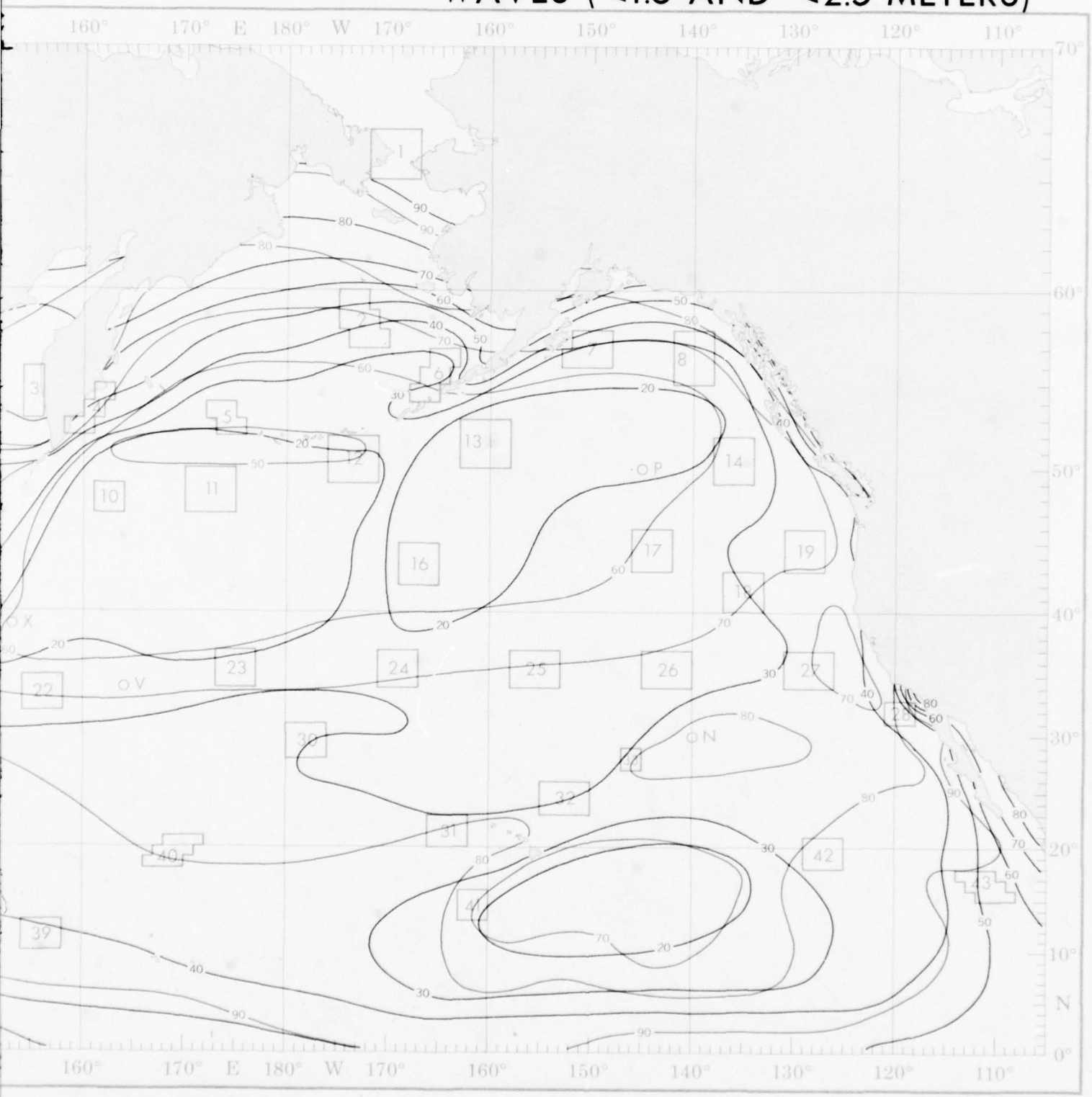
nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL

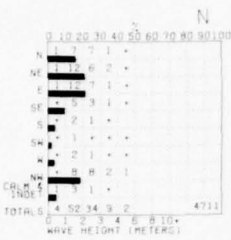
WAVES

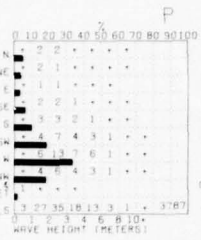

Wave direction and height
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
+ indicates < 5% but >0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 3-6 7-9 10-12 13-19 20-25 26-32 ≥33
Meters 0-.5 1-1.5 2-2.5 3-3.5 4-5.5 6-7.5 8-9.5 ≥10
0 1 2 3 4 6 8 10+
Printed scale on bottom of chart
N
NE
E
SE
S
SW
W
NW
CALM & INDET.
TOTALS
11 11 24 21 17 9 5 2 1240
WAVE HEIGHT (METERS)
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

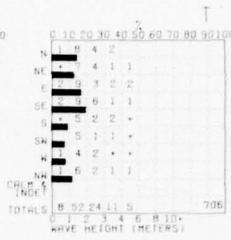
WAVES (<1.5 AND <2.5 METERS)

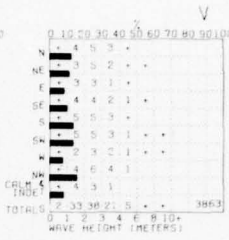


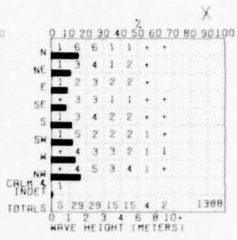
WAVE DIRECTION AND HEIGHT



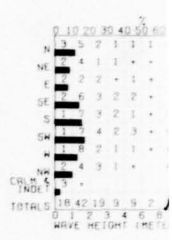




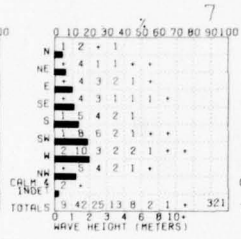


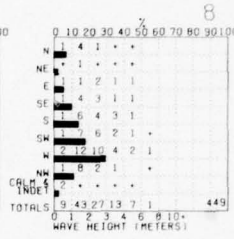


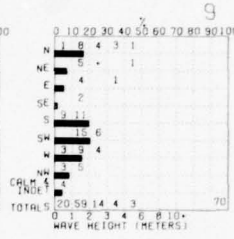
INSUFFICIENT DATA

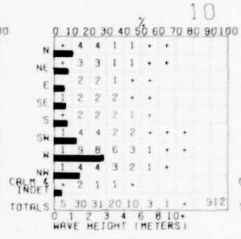


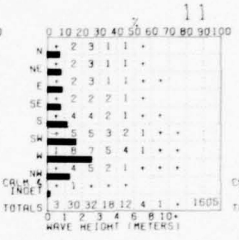


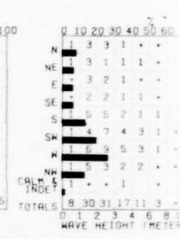


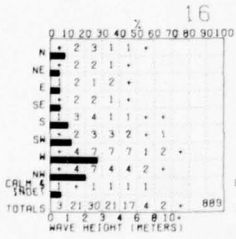


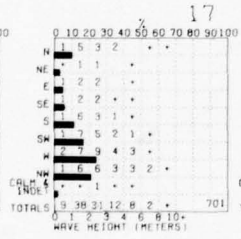


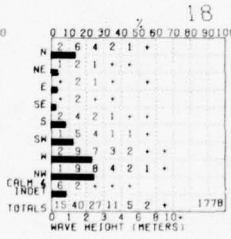


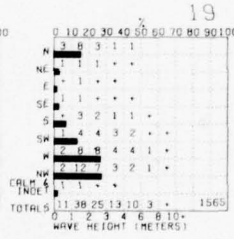


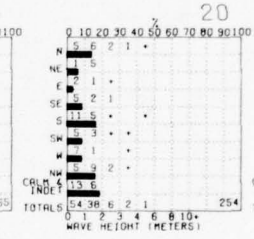


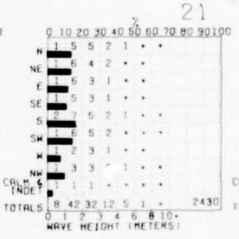


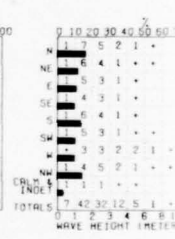


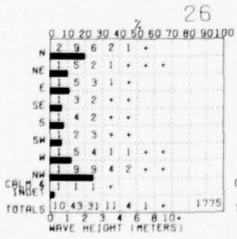


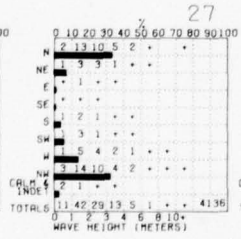


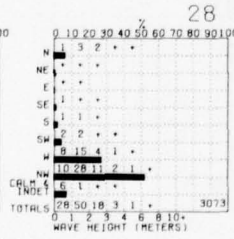


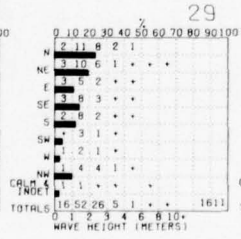


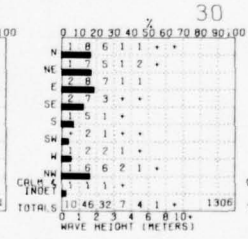


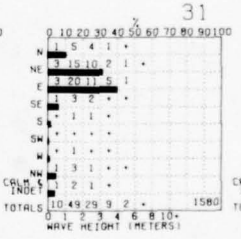


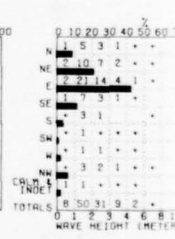


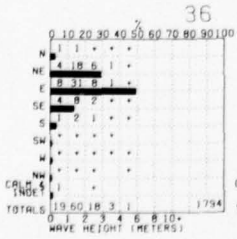


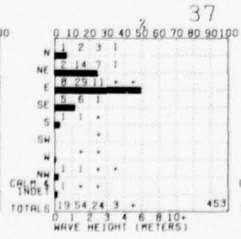


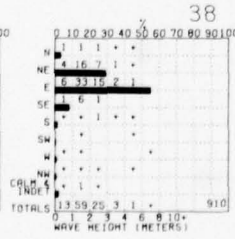


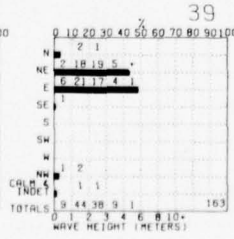


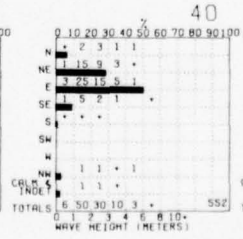


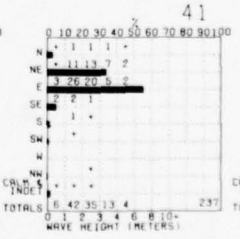


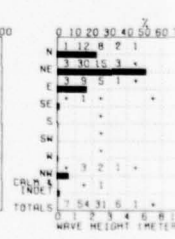










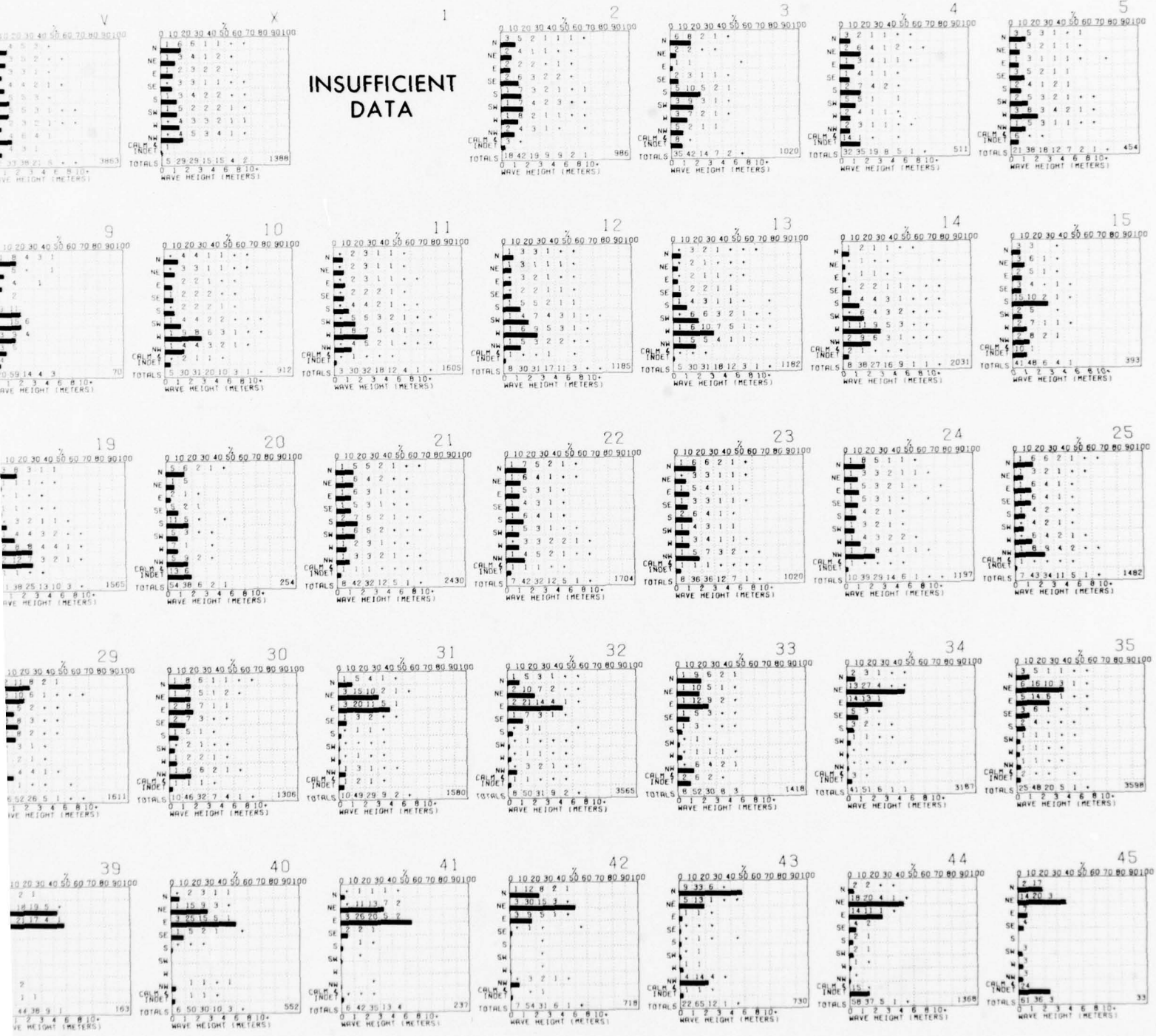


Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

EIGHT

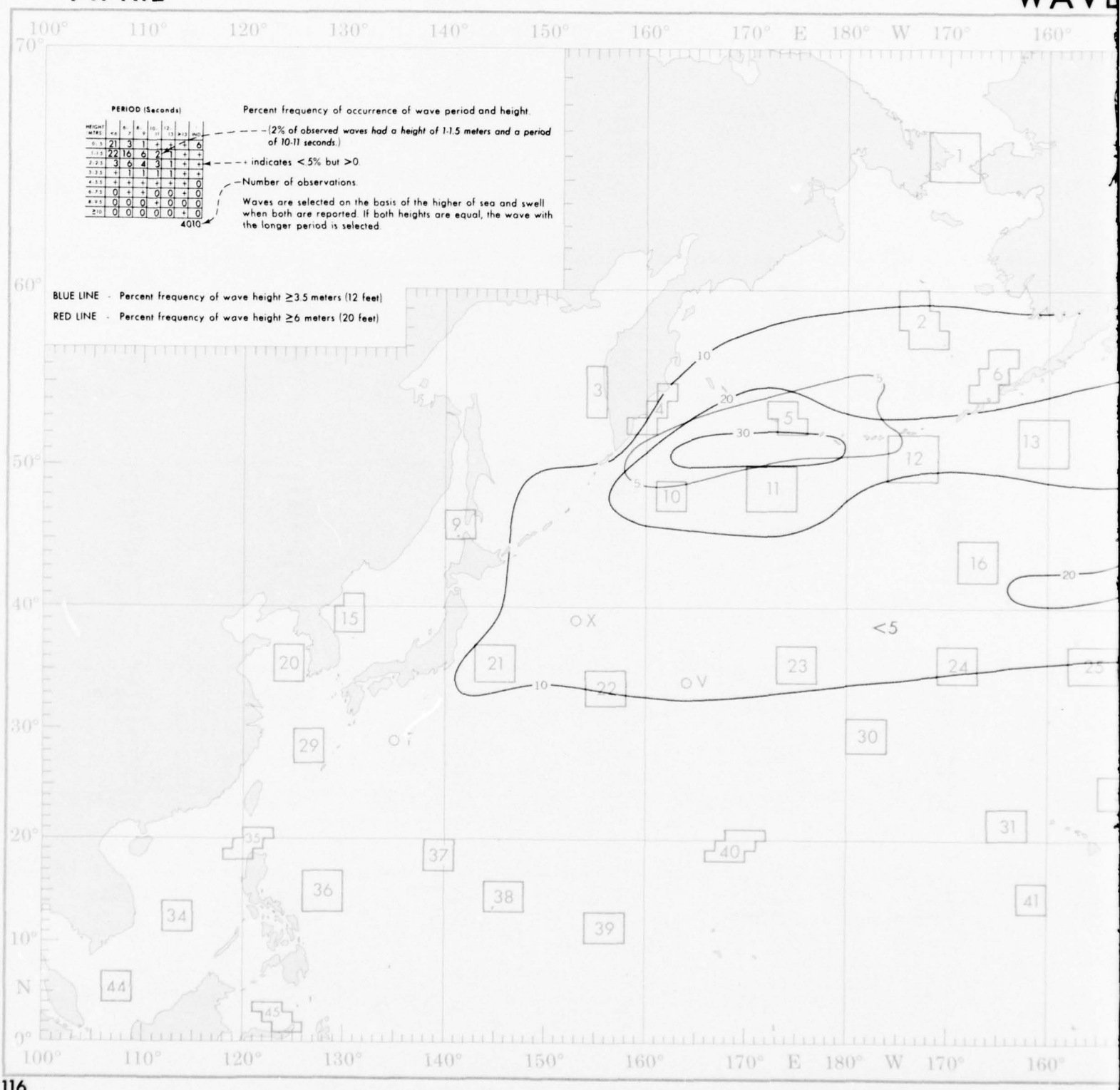
APRIL

INSUFFICIENT DATA



ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL


PERIOD (Seconds)
HEIGHT MTRS
<6
6-7
8-9
10-11
12-13
>13
IND
0-1.5 21 3 1 + + + 6
1.5-2.5 22 16 6 2 + + +
2.5-3.5 3 6 4 3 1 + +
3.5-4.5 + 1 1 1 1 + +
4.5-6 + + + + + + 0
6-7.5 0 + + 0 0 + 0
7.5-9 0 0 0 + 0 0 0
≥10 0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
10
20
30
5
<5
X
V
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 35 36 37 38 39 40 41 44 45

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	1	+	0	0	1
1-1.5	21	16	10	2	+	+	3
2-2.5	6	14	8	4	1	+	1
3-3.5	1	3	3	1	+	0	+
4-5.5	0	1	1	+	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4723

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	0	0	0	1
1-1.5	8	11	4	1	1	+	+
2-2.5	2	16	9	5	3	+	+
3-3.5	1	6	7	3	2	+	+
4-5.5	+	3	6	3	1	+	+
6-7.5	0	+	1	1	+	+	0
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	+	+	+	0

3790

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	6	2	0	0	0	0
1-1.5	0	13	39	+	+	0	0
2-2.5	+	4	20	0	0	0	0
3-3.5	0	+	10	1	0	0	0
4-5.5	0	1	4	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

707

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	1	+	+	0	0	+
1-1.5	9	11	5	3	+	+	4
2-2.5	2	14	13	5	1	+	2
3-3.5	+	4	10	5	1	+	1
4-5.5	0	+	2	2	1	+	0
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	0	+	+	0	0
≥10	0	0	0	0	0	0	0

3865

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	1	1	0	0	0	3
1-1.5	+	3	15	+	+	0	10
2-2.5	+	7	16	1	+	0	3
3-3.5	+	3	10	1	+	0	+
4-5.5	+	3	10	2	+	0	0
6-7.5	0	1	2	1	+	+	0
8-9.5	0	0	1	+	1	0	0
≥10	0	0	0	0	0	0	0

1389

INSUFFICIENT DATA

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	1	+			
1-1.5	11	7	10	5			
2-2.5	4	5	2	2			
3-3.5	1	3	2	1			
4-5.5	+	4	2	+			
6-7.5	0	1	+	+			
8-9.5	0	+	1	0			
≥10	0	0	0	0			

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	17	12	2	1	+	+	1
2-2.5	6	15	8	1	+	+	+
3-3.5	1	5	4	2	+	+	+
4-5.5	+	2	2	3	1	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	+	+	0

2488

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	1	0	0	0	3
1-1.5	20	14	3	1	1	+	2
2-2.5	6	7	5	2	1	2	1
3-3.5	4	1	4	1	0	1	1
4-5.5	+	2	3	1	0	+	1
6-7.5	0	1	+	1	+	0	0
8-9.5	0	+	1	0	0	0	0
≥10	0	0	0	+	0	0	0

325

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	0	+	0	0	2
1-1.5	22	12	4	2	2	+	+
2-2.5	8	7	5	2	2	1	1
3-3.5	1	4	3	3	1	1	+
4-5.5	1	2	1	2	+	+	1
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

460

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	22
1-1.5	7	5	0	0	0	0	44
2-2.5	0	0	1	0	0	0	12
3-3.5	1	0	0	0	0	0	3
4-5.5	0	1	0	0	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

73

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	3	+	+	0	0	1
1-1.5	5	18	4	1	+	0	2
2-2.5	2	13	11	3	1	0	2
3-3.5	0	5	7	4	2	+	1
4-5.5	0	2	3	2	2	1	+
6-7.5	0	0	1	1	1	1	+
8-9.5	0	0	+	+	0	+	0
≥10	0	0	0	0	+	0	0

917

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	0	0	0	1
1-1.5	9	13	5	1	+	+	1
2-2.5	3	10	12	5	1	1	+
3-3.5	1	3	4	5	3	1	+
4-5.5	+	1	4	4	2	1	+
6-7.5	0	+	1	1	1	1	+
8-9.5	0	0	+	+	+	+	0
≥10	0	+	+	0	+	0	0

1613

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	+	0	0	1
1-1.5	8	8	3	2	+	0	+
2-2.5	3	8	11	4	2	+	2
3-3.5	+	4	9	4	2	1	1
4-5.5	+	2	6	5	2	1	2
6-7.5	0	+	1	1	+	+	1
8-9.5	0	0	1	1	1	+	0
≥10	0	0	0	0	0	+	0

890

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	+	0	0	1
1-1.5	17	12	5	2	1	+	1
2-2.5	4	12	8	5	1	+	+
3-3.5	1	3	3	3	1	1	1
4-5.5	+	1	2	2	+	1	+
6-7.5	0	+	+	1	+	1	+
8-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

713

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	3	1	+	0	0	7
1-1.5	12	13	8	3	1	+	2
2-2.5	3	9	9	3	1	1	1
3-3.5	1	2	4	2	1	+	+
4-5.5	+	1	2	1	1	+	+
6-7.5	0	1	+	+	+	+	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

1804

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	3	1	1	0	0	1
1-1.5	11	15	9	1	1	+	1
2-2.5	5	7	8	3	2	+	1
3-3.5	1	2	4	3	2	1	+
4-5.5	+	2	2	3	2	1	0
6-7.5	0	+	+	1	1	+	0
8-9.5	0	0	+	0	+	0	0
≥10	0	0	0	0	0	0	0

1575

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	34	2	1	0	0	0	21
1-1.5	16	11	1	1	0	0	6
2-2.5	0	2	+	1	1	+	0
3-3.5	0	1	1	0	0	0	0
4-5.5	0	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

278

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	18	16	4	1	+	+	1
2-2.5	5	10	10	4	1	+	1
3-3.5	1	4	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	+	+	+	+
≥10	0	0	0	0	0	0	0

2469

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	+	0	0	2
1-1.5	17	15	6	2	1	1	1
2-2.5	4	9	10	5	1	1	1
3-3.5	1	2	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	0	0	0	0

1806

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	2	1	+	0	0	2
1-1.5	16	15	6	1	1	+	2
2-2.5	6	10	8	3	1	1	1
3-3.5	1	4	4	2	1	+	+
4-5.5	+	1	1	1	1	+	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	+	0	+	0

4190

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	3	1	1	0	0	6
1-1.5	30	13	4	1	+	0	1
2-2.5	5	7	4	1	+	+	+
3-3.5	1	1	1	+	+	+	+
4-5.5	+	+	+	+	+	0	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3128

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	+	+	0	0	3
1-1.5	25	18	4	1	+	+	2
2-2.5	2	9	9	3	+	0	2
3-3.5	+	2	1	1	+	+	+
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	+	0	0	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1644

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	1	0	0	2
1-1.5	21	14	5	2	2	1	1
2-2.5	6	10	7	5	1	1	1
3-3.5	1	1	3	2	1	+	+
4-5.5	+	+	1	1	1	1	0
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1334

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	1	+	0	0	2
1-1.5	22	14	8	1	1	+	3
2-2.5	6	10	8	3	1	1	1
3-3.5	1	3	3	1	1	0	+
4-5.5	+	1	1	+	+	0	0
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1603

36

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	+	+	0	0	1
1-1.5	25	25	7	1	+	+	1
2-2.5	1	5	7	2	+	1	+
3-3.5	1	+	1	+	+	+	0
4-5.5	+	+	0	+	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1839

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	+	0	0	0	1
1-1.5	25	21	5	1	1	+	1
2-2.5	4	6	10	2	1	+	+
3-3.5	0	1	1	1	0	+	0
4-5.5	0	0	0	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

457

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	+	+	0	0	+
1-1.5	26	20	7	2	2	0	1
2-2.5	4	8	8	3	1	+	+
3-3.5	1	+	1	1	0	0	+
4-5.5	0	+	+	1	0	0	0
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

923

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	0	0	0	0	1
1-1.5	22	11	4	3	2	0	1
2-2.5	8	14	12	3	0	0	1
3-3.5	0	4	4	1	0	0	0
4-5.5	0	0	1	0	0	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

166

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	0	0	0	0	+
1-1.5	26	11	7	1	2	0	1
2-2.5	8	10	8	1	2	1	1
3-3.5	1	2	4	1	+	1	+
4-5.5	1	+	1	+	0	1	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

557

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	2	2	0	0	2
1-1.5	11	18	10	0	+	0	2
2-2.5	3	11	18	2	+	0	+
3-3.5	+	4	6	3	0	+	0
4-5.5	0	2	1	+	+	+	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

237

Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

APRIL

INSUFFICIENT DATA

1

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	17	1	1	+	0	0	3
1-1.5	11	7	10	5	4	+	1
2-2.5	4	5	2	2	3	+	1
3-3.5	1	3	2	1	2	0	0
4-5.5	+	4	2	+	1	0	+
6-7.5	0	1	+	+	+	0	0
8-9.5	0	+	1	0	0	0	0
≥10	0	0	0	0	0	0	0

1042

2

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	27	2	+	+	0	0	11
1-1.5	22	10	3	1	1	0	2
2-2.5	3	7	1	+	1	0	+
3-3.5	+	3	2	+	+	0	1
4-5.5	+	+	1	+	0	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1108

3

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	15	2	+	+	0	0	18
1-1.5	16	5	6	1	1	+	5
2-2.5	4	5	5	1	+	+	2
3-3.5	1	1	3	1	+	0	1
4-5.5	1	2	2	1	0	+	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

533

4

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	12	+	+	0	0	0	10
1-1.5	14	3	8	+	0	0	12
2-2.5	4	6	3	1	1	0	3
3-3.5	2	4	3	1	+	0	3
4-5.5	+	1	3	1	+	0	2
6-7.5	0	+	1	0	0	1	0
8-9.5	0	0	+	+	+	0	0
≥10	0	0	0	+	0	0	0

460

5

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	28	2	+	1	0	0	12
1-1.5	38	7	1	0	+	0	2
2-2.5	1	3	2	0	0	0	0
3-3.5	+	1	2	1	0	0	+
4-5.5	0	0	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

399

V

HEIGHT (MTRS)	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	22
1-1.5	0	0	0	0	44
2-2.5	1	0	0	0	12
3-3.5	0	0	0	0	3
4-5.5	0	0	0	0	1
6-7.5	0	0	0	0	0
8-9.5	0	0	0	0	0
≥10	0	0	0	0	0

73

X

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	2	3	+	+	0	0	1
1-1.5	5	18	4	1	+	0	2
2-2.5	2	13	11	3	1	0	2
3-3.5	0	5	7	4	2	+	1
4-5.5	0	2	3	2	2	1	+
6-7.5	0	0	1	1	1	1	+
8-9.5	0	0	+	+	+	0	0
≥10	0	0	0	0	0	+	0

917

9

HEIGHT (MTRS)	8- 9	10- 11	12- 13	>13	IND
0-.5	1	1	0	0	1
1-1.5	9	1	1	+	1
2-2.5	8	3	2	+	1
3-3.5	4	3	2	1	+
4-5.5	2	3	2	1	0
6-7.5	+	1	1	+	0
8-9.5	+	+	0	+	0
≥10	0	0	0	0	0

1575

10

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	34	2	1	0	0	0	21
1-1.5	16	11	1	1	0	0	6
2-2.5	0	2	+	1	1	+	0
3-3.5	0	1	1	0	0	0	0
4-5.5	0	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

278

11

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	2	+	+	0	0	0	1
1-1.5	9	13	5	1	+	+	1
2-2.5	3	10	12	5	1	1	+
3-3.5	1	3	4	5	3	1	+
4-5.5	+	1	4	4	2	1	+
6-7.5	0	+	1	1	1	1	+
8-9.5	0	0	+	+	+	0	0
≥10	0	+	0	+	0	0	0

1613

12

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	6	1	+	+	0	0	1
1-1.5	11	12	5	1	+	+	1
2-2.5	3	9	12	5	1	+	+
3-3.5	1	4	4	4	2	1	1
4-5.5	+	3	3	2	1	1	+
6-7.5	0	+	1	1	1	+	0
8-9.5	0	0	0	+	+	+	0
≥10	0	0	0	0	0	+	0

1194

13

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	4	+	+	0	0	0	1
1-1.5	11	13	4	1	1	+	1
2-2.5	4	10	10	5	1	1	+
3-3.5	1	6	6	3	1	1	+
4-5.5	+	3	5	3	1	+	+
6-7.5	0	+	2	1	+	+	+
8-9.5	0	+	0	+	0	+	0
≥10	0	0	0	0	0	+	0

1191

14

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	5	+	+	+	0	0	2
1-1.5	19	10	5	1	+	+	2
2-2.5	7	9	7	3	1	+	1
3-3.5	2	7	4	2	1	1	+
4-5.5	+	2	4	1	+	+	+
6-7.5	0	+	+	+	+	0	+
8-9.5	0	+	+	+	+	+	0
≥10	0	0	+	+	+	+	0

2045

15

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	8	1	1	1	0	0	1
1-1.5	17	13	5	2	1	+	1
2-2.5	4	9	10	3	1	1	1
3-3.5	1	3	4	3	1	1	1
4-5.5	1	1	1	2	1	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	0	+	+	0	0
≥10	0	+	0	0	0	0	0

1221

16

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	7	+	+	+	0	0	1
1-1.5	15	12	5	1	1	+	2
2-2.5	4	12	11	4	1	1	2
3-3.5	+	3	3	3	1	+	+
4-5.5	+	2	2	2	1	1	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	0	0	0	0

1034

17

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	19	13	5	2	1	+	2
1-1.5	15	12	5	1	1	+	2
2-2.5	4	11	11	4	1	1	1
3-3.5	1	4	4	2	1	+	1
4-5.5	+	1	1	2	1	+	+
6-7.5	0	+	1	+	0	+	0
8-9.5	0	+	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1732

18

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	18	16	4	1	+	+	1
2-2.5	5	10	10	4	1	+	1
3-3.5	1	4	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

2469

19

HEIGHT (MTRS)	8- 9	10- 11	12- 13	>13	IND
0-.5	1	1	0	0	1
1-1.5	9	1	1	+	1
2-2.5	8	3	2	+	1
3-3.5	4	3	2	1	+
4-5.5	2	3	2	1	0
6-7.5	+	1	1	+	0
8-9.5	+	+	0	+	0
≥10	0	0	0	0	0

1644

20

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	8	1	+	1	0	0	2
1-1.5	21	14	5	2	2	1	1
2-2.5	6	10	7	5	1	1	1
3-3.5	1	1	3	2	1	+	+
4-5.5	+	+	1	1	1	1	0
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1334

21

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	19	13	5	2	1	+	2
2-2.5	4	11	11	4	1	1	1
3-3.5	1	4	4	2	1	+	1
4-5.5	+	1	1	2	1	+	+
6-7.5	0	+	1	+	0	+	0
8-9.5	0	+	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1603

22

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	6	1	+	+	0	0	2
1-1.5	22	16	6	2	1	+	1
2-2.5	6	12	7	3	1	+	1
3-3.5	1	2	2	1	1	+	+
4-5.5	+	1	1	+	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3622

23

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	5	1	1	+	0	0	2
1-1.5	16	15	8	3	1	+	7
2-2.5	4	11	7	3	2	+	2
3-3.5	1	2	3	1	+	+	+
4-5.5	0	+	1	1	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1438

24

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	38	3	1	+	0	0	4
1-1.5	26	16	4	+	+	+	1
2-2.5	1	2	2	+	+	+	0
3-3.5	+	+	+	+	0	0	0
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3453

25

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	6	+	+	+	0	0	1
1-1.5	18	14	6	3	1	+	1
2-2.5	6	11	10	4	1	1	1
3-3.5	1	2	3	2	1	1	+
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	+	+	0	0
≥10	0	0	0	0	0	0	0

3745

29

HEIGHT (MTRS)	8- 9	10- 11	12- 13	>13	IND
+	+	0	0	0	3
4	1	+	+	0	2
9	3	+	0	0	2
1	1	+	+	+	+
+	+	+	+	0	+
+	0	0	+	0	0
+	0	0	0	0	0
0	0	0	0	0	0

166

30

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	8	1	+	1	0	0	2
1-1.5	21	14	5	2	2	1	1
2-2.5	6	10	7	5	1	1	1
3-3.5	1	1	3	2	1	+	+
4-5.5	+	+	1	1	1	1	0
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

557

31

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	9	1	1	+	0	0	2
1-1.5	22	14	8	1	1	+	3
2-2.5	6	10	8	3	1	1	1
3-3.5	1	3	3	1	1	0	+
4-5.5	+	1	1	+	+	0	0
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

237

32

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	6	1	+	+	0	0	2
1-1.5	22	16	6	2	1	+	1
2-2.5	6	12	7	3	1	+	1
3-3.5	1	2	2	1	1	+	+
4-5.5	+	1	1	+	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

731

33

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	5	1	1	+	0	0	2
1-1.5	16	15	8	3	1	+	7
2-2.5	4	11	7	3	2	+	2
3-3.5	1	2	3	1	+	+	+
4-5.5	0	+	1	1	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

753

34

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	38	3	1	+	0	0	4
1-1.5	26	16	4	+	+	+	1
2-2.5	1	2	2	+	+	+	0
3-3.5	+	+	+	+	0	0	0
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1546

35

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	22	2	+	+	0	0	3
1-1.5	22	19	4	1	1	+	1
2-2.5	3	7	7	2	+	+	+
3-3.5	+	1	2	1	+	+	+
4-5.5	+	+	+	+	+	0	+
6-7.5	0	+	+	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

40

39

HEIGHT (MTRS)	8- 9	10- 11	12- 13	>13	IND
0	0	0	0	0	+
4	3	2	0	0	1
12	3	0	0	0	1
4	1	0	0	0	0
1	0	0	1	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

165

40

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	6	1	0	0	0	0	+
1-1.5	26	11	7	1	2	0	1
2-2.5	8	10	8	1	2	1	1
3-3.5	1	2	4	1	+	1	+
4-5.5	1	+	1	+	0	1	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

557

41

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	1	2	2	0	0	0	2
1-1.5	11	18	10	0	+	0	2
2-2.5	3	11	18	2	+	0	+
3-3.5	+	4	6	3	0	+	0
4-5.5	0	2	1	+	+	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

237

42

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	7	+	+	0	0	0	2
1-1.5	25	17	7	2	+	0	2
2-2.5	4	11	8	3	1	1	3
3-3.5	1	2	2	1	1	+	+
4-5.5	+	0	+	+	+	+	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

731

43

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	18	3	+	+	0	0	3
1-1.5	30	20	7	2	2	1	1
2-2.5	2	5	3	1	+	+	1
3-3.5	+	+	+	+	0	0	0
4-5.5	+	0	0	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

753

44

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	39	3	1	1	0	0	19
1-1.5	18	11	2	+	+	0	1
2-2.5	1	2	1	+	0	0	0
3-3.5	+	+	+	+	0	0	0
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1546

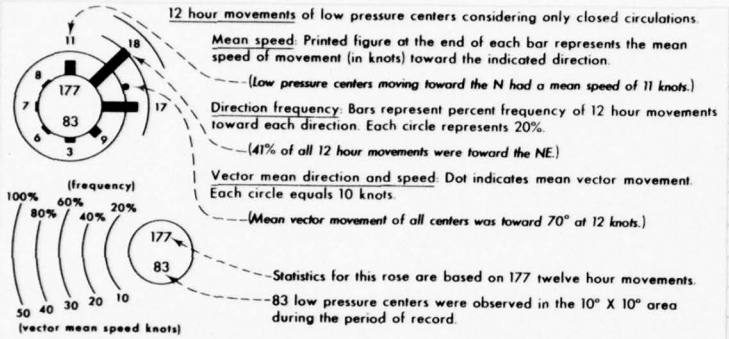
45

HEIGHT (MTRS)	6- <6	8- 7	10- 9	12- 11	13	>13	IND
0-.5	43	3	0	3	0	0	20
1-1.5	13	15	0	0	0	0	3
2-2.5	0	3	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

40

e objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

APRIL



12 hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 11 knots.)

Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.

(41% of all 12 hour movements were toward the NE.)

Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.

(Mean vector movement of all centers was toward 70° at 12 knots.)

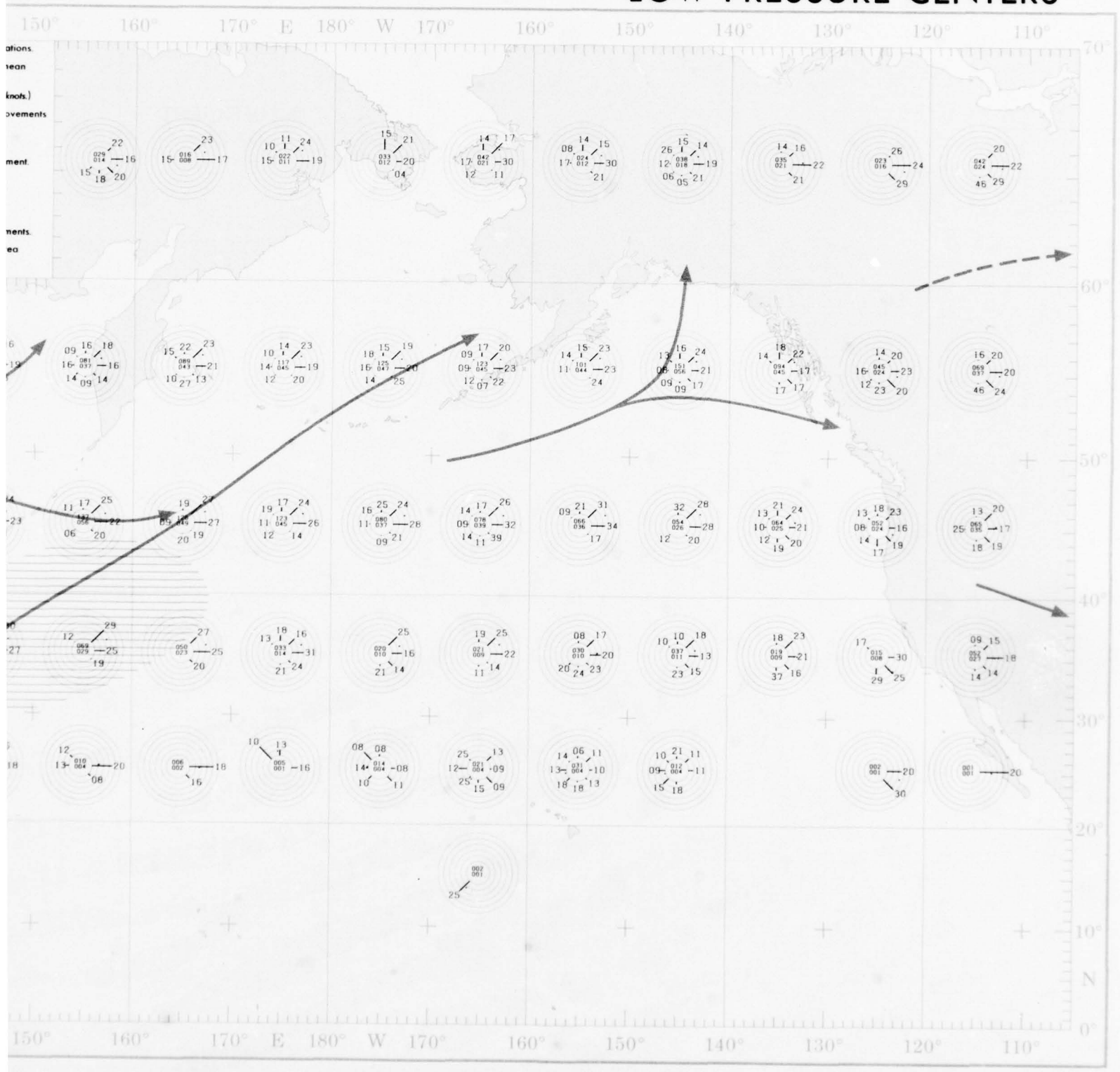
Statistics for this rose are based on 177 twelve hour movements.

83 low pressure centers were observed in the 10° X 10° area during the period of record.

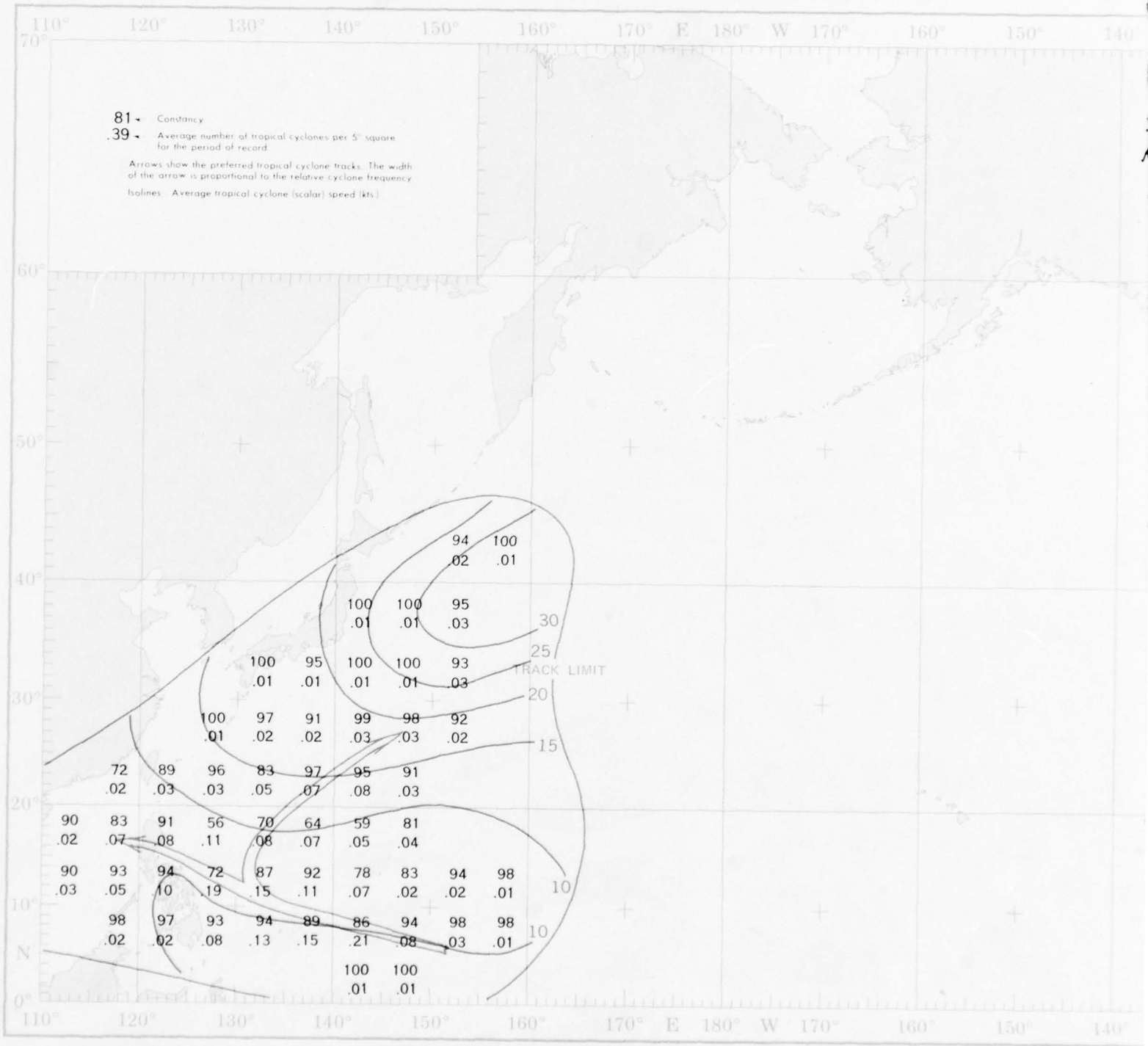
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)

RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

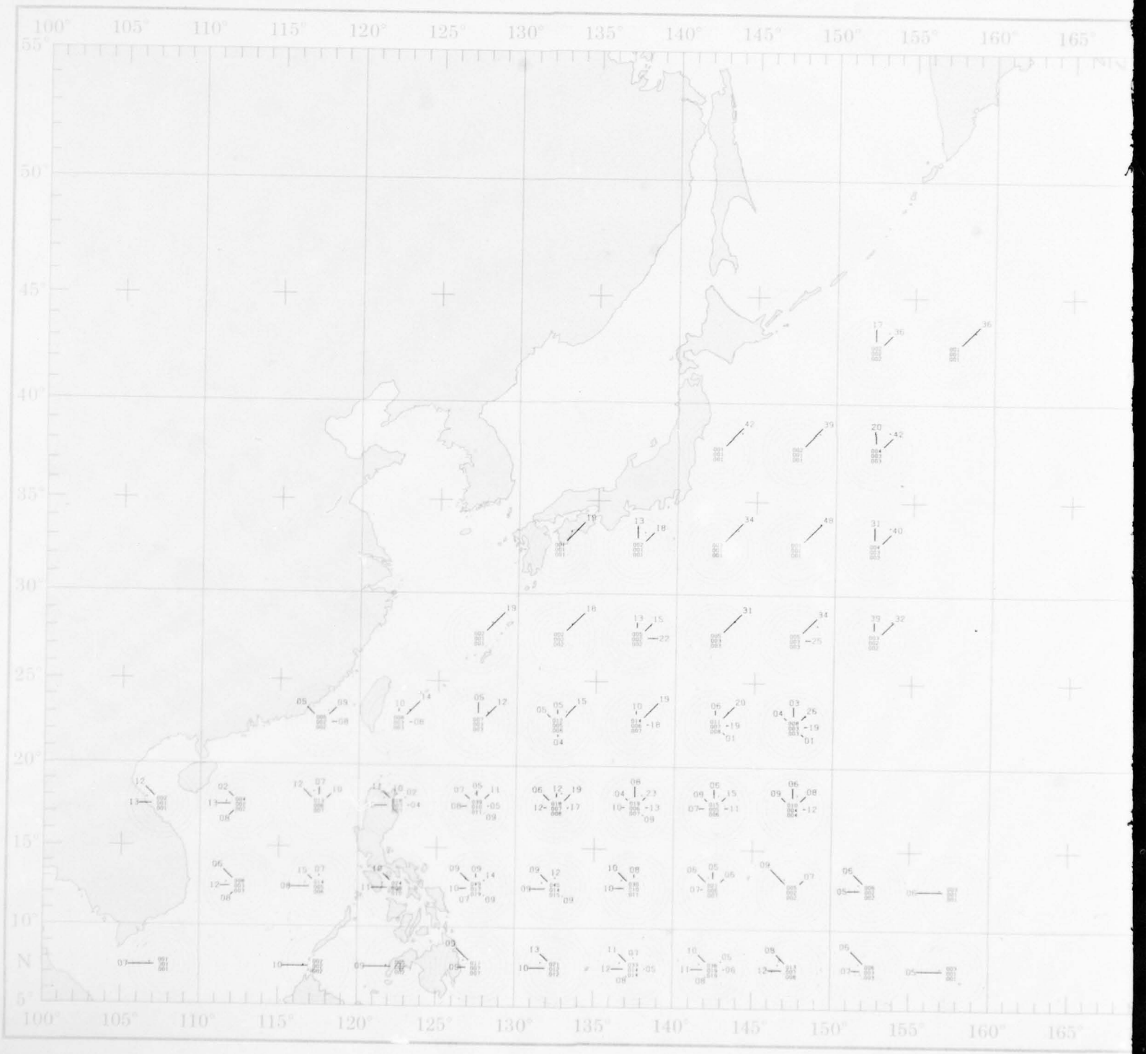


TROPICAL CYCLONE CHARACTERISTICS

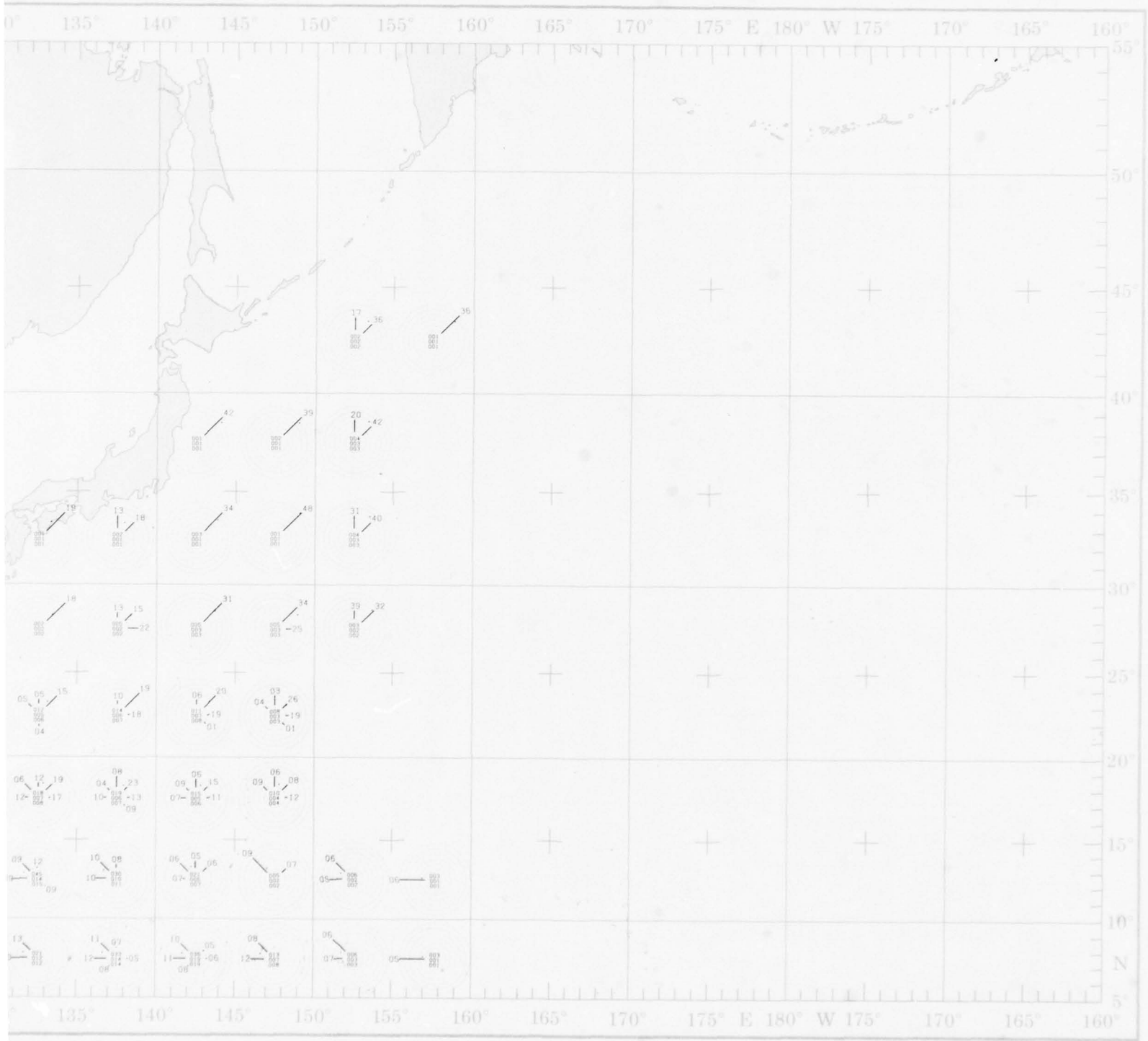



60° 170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
30
25
RACK LIMIT
20
15
10
10

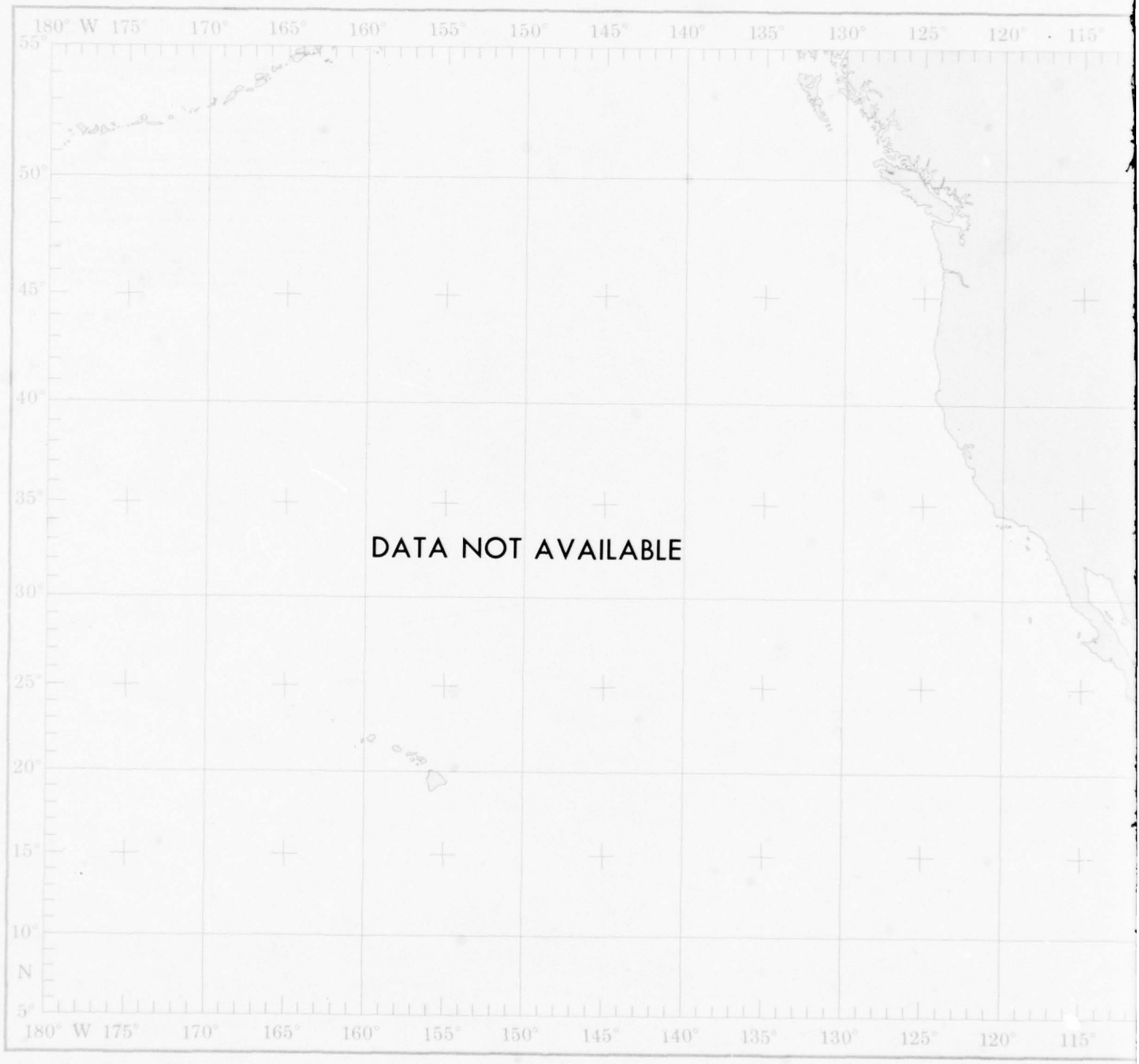
APRIL


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

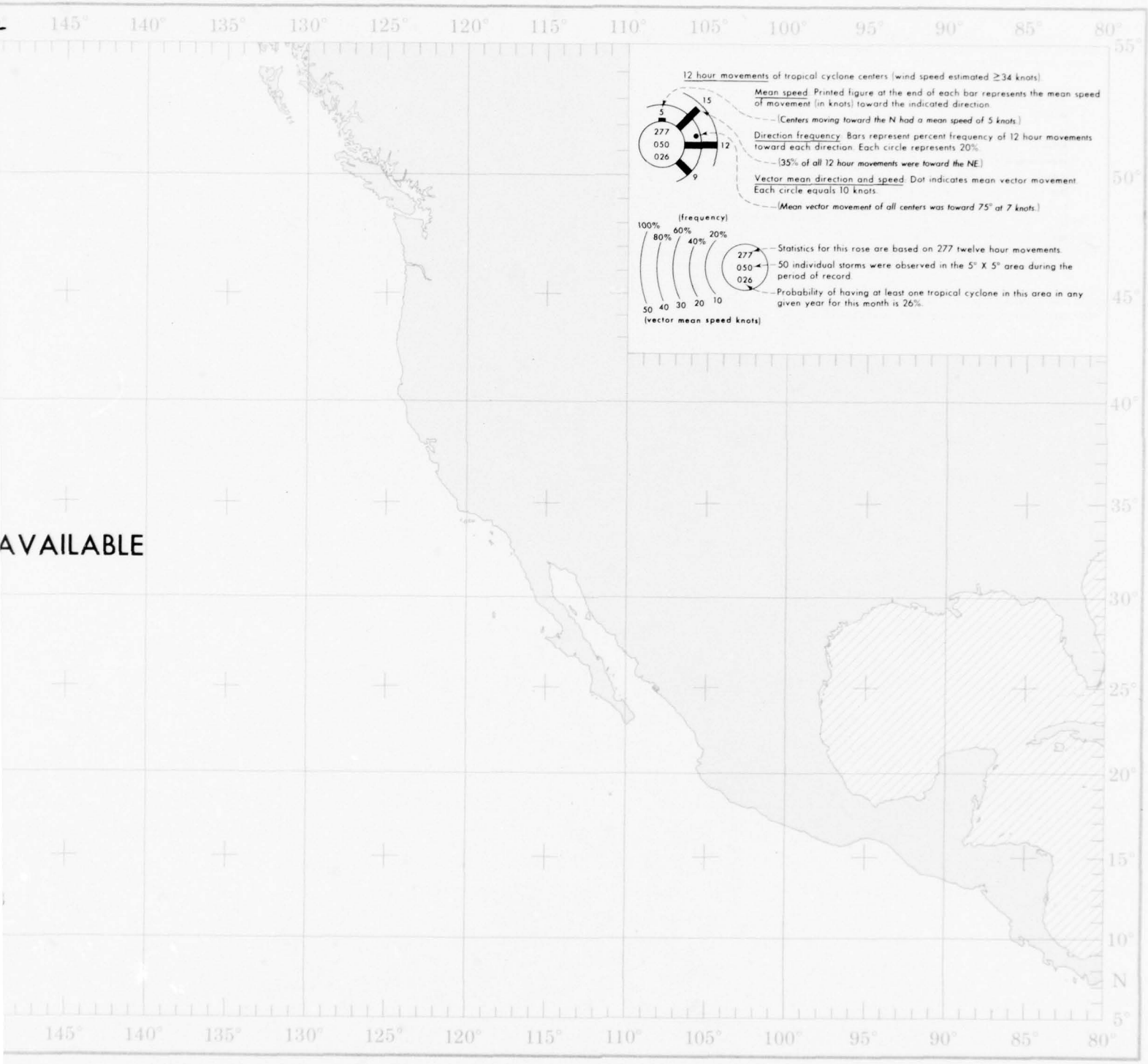
TROPICAL CYCLONE



TROPICAL CYCLONE



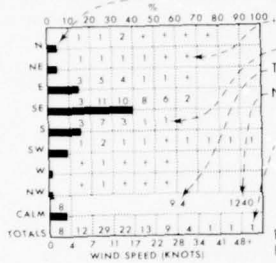
APRIL



AVAILABLE

MAY

Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.



WIND SPEED INTERVAL (KNOTS)

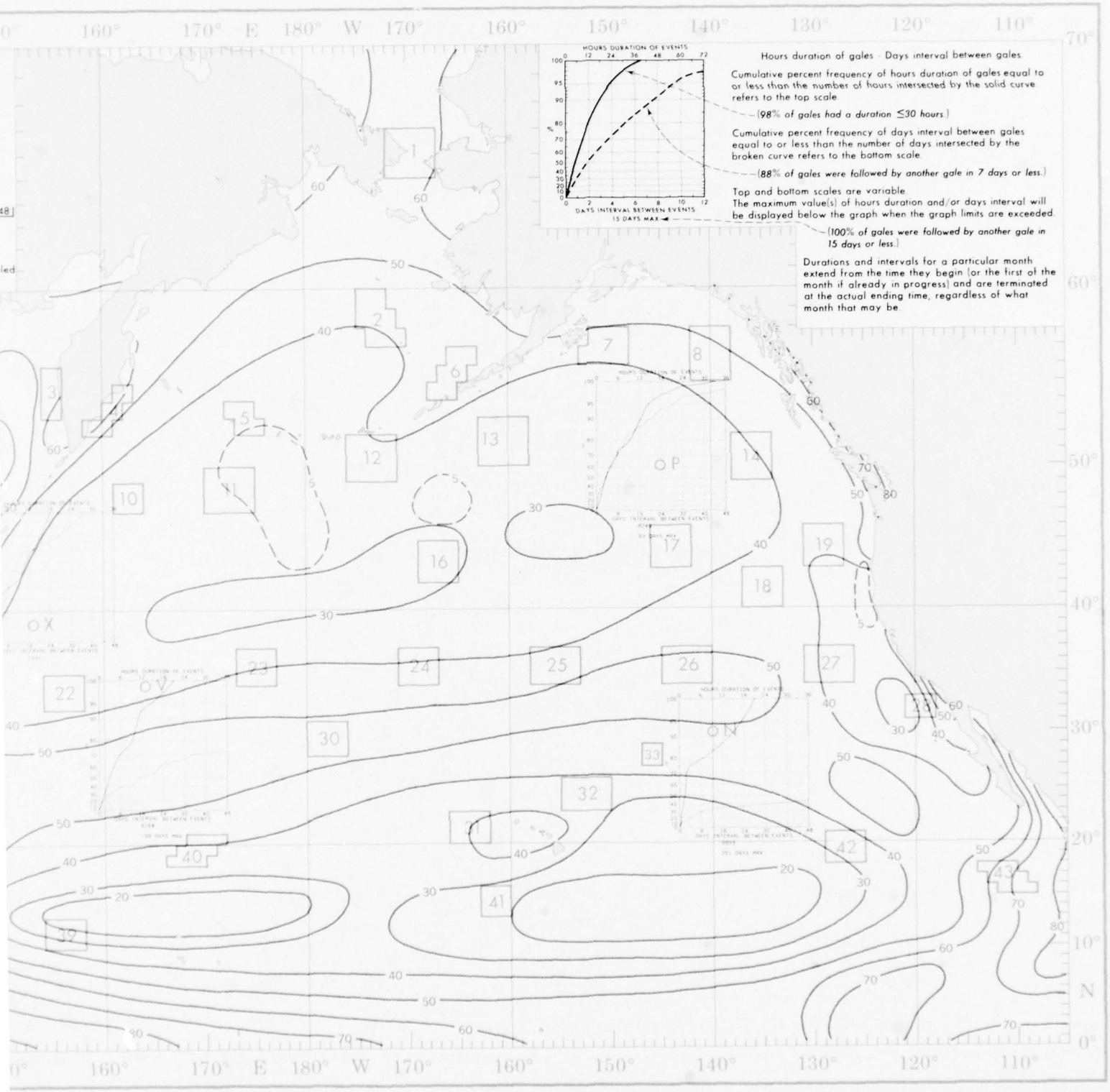
0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

Printed scale on bottom of chart

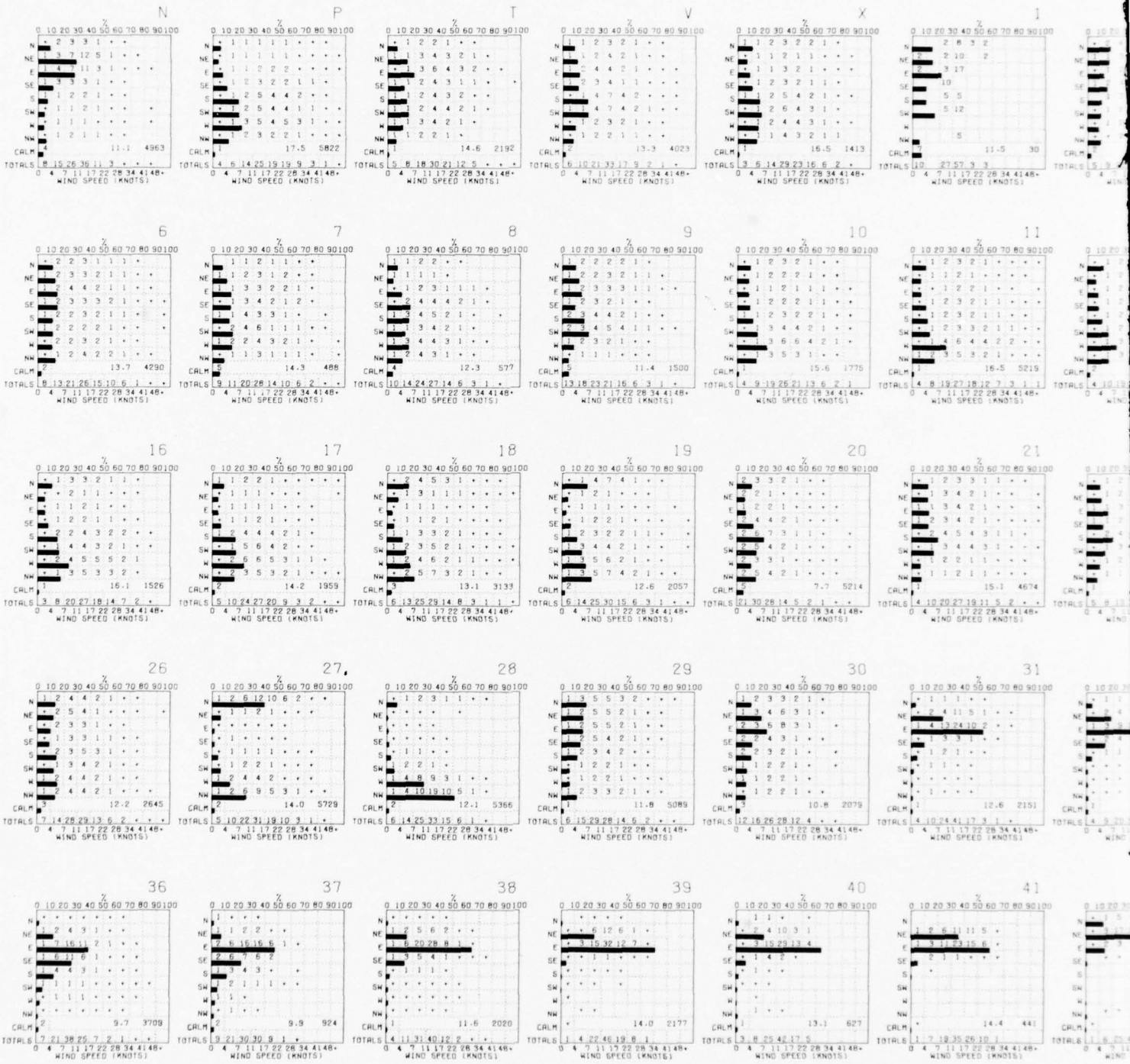
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).

BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots

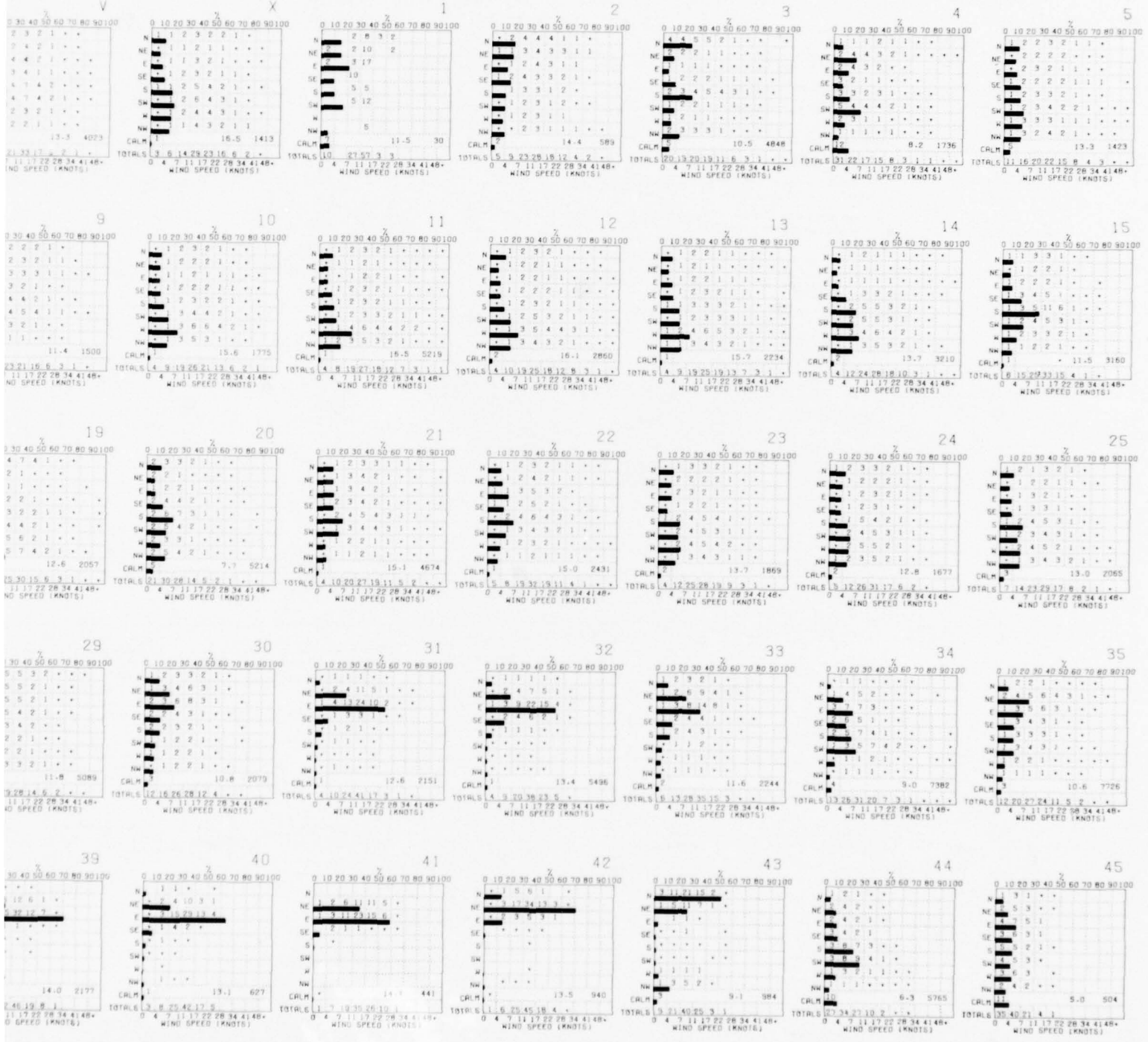
SURFACE WINDS



WIND DIRECTION AND SPEED

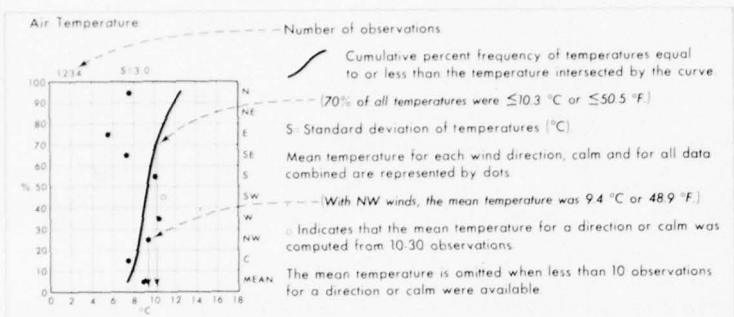


Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w



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MAY

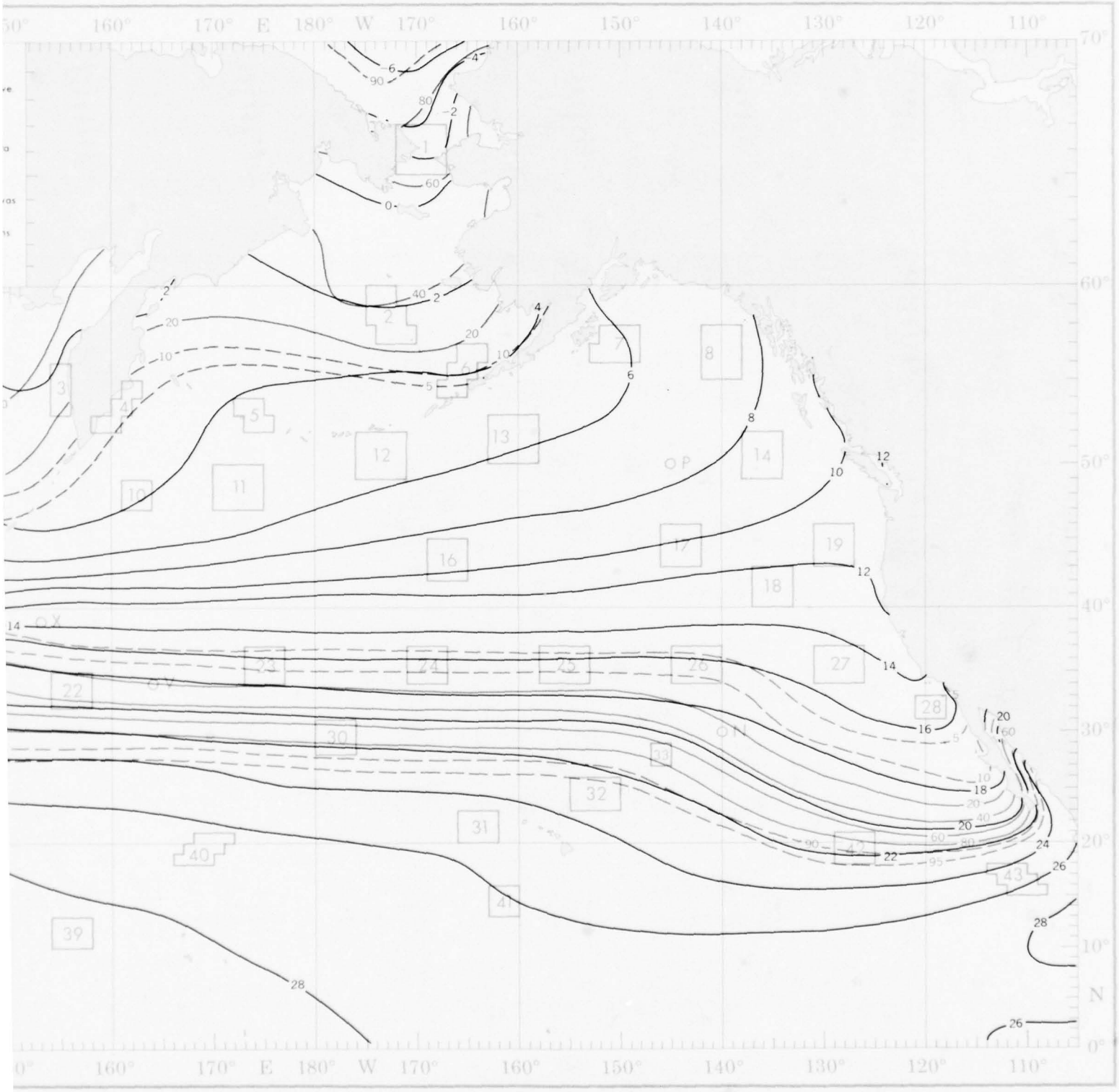


BLACK LINE - Mean air temperature (°C)

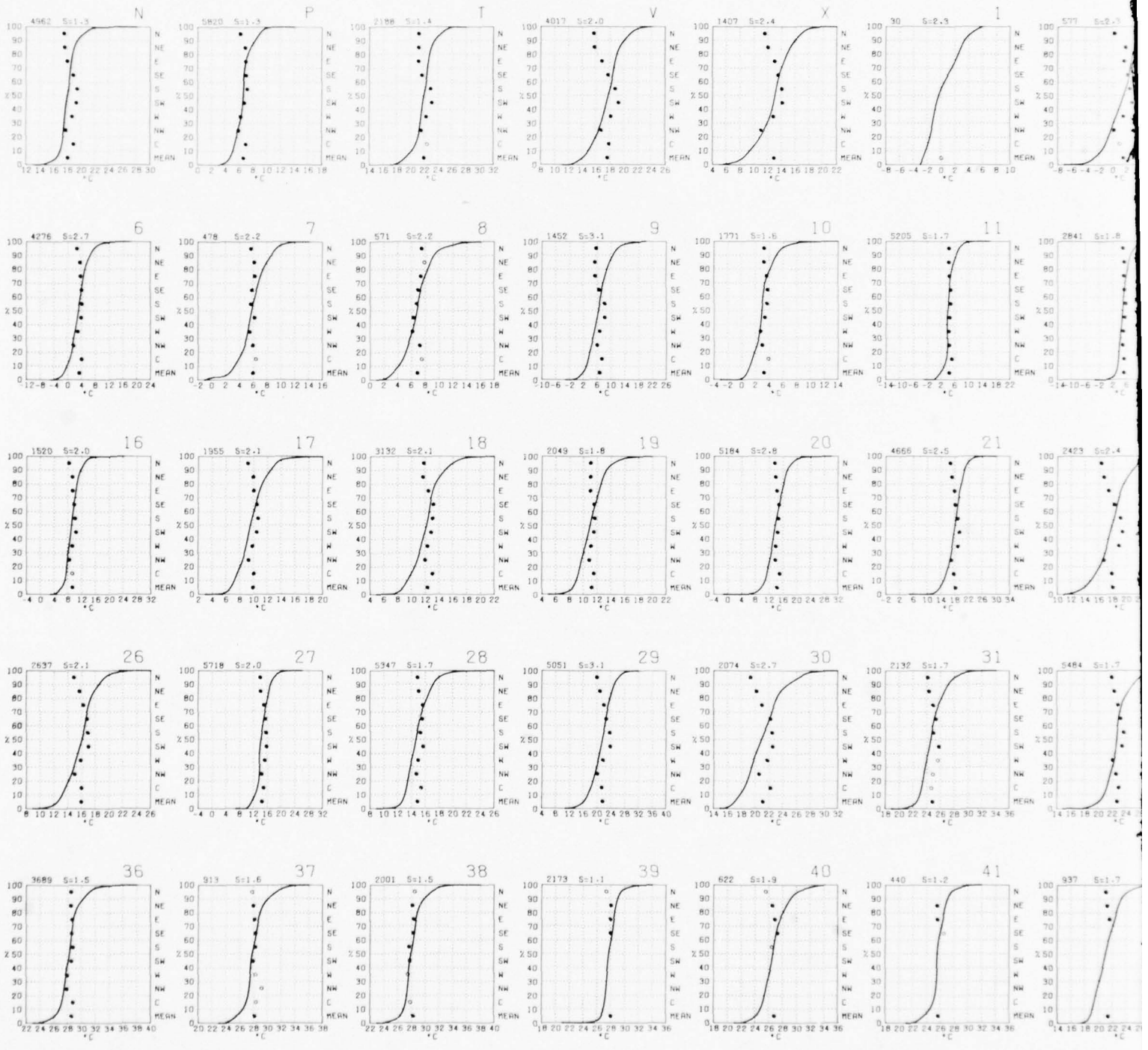
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)

RED LINE - Percent frequency of temperature ≥20°C (68°F)

SURFACE AIR TEMPERATURE

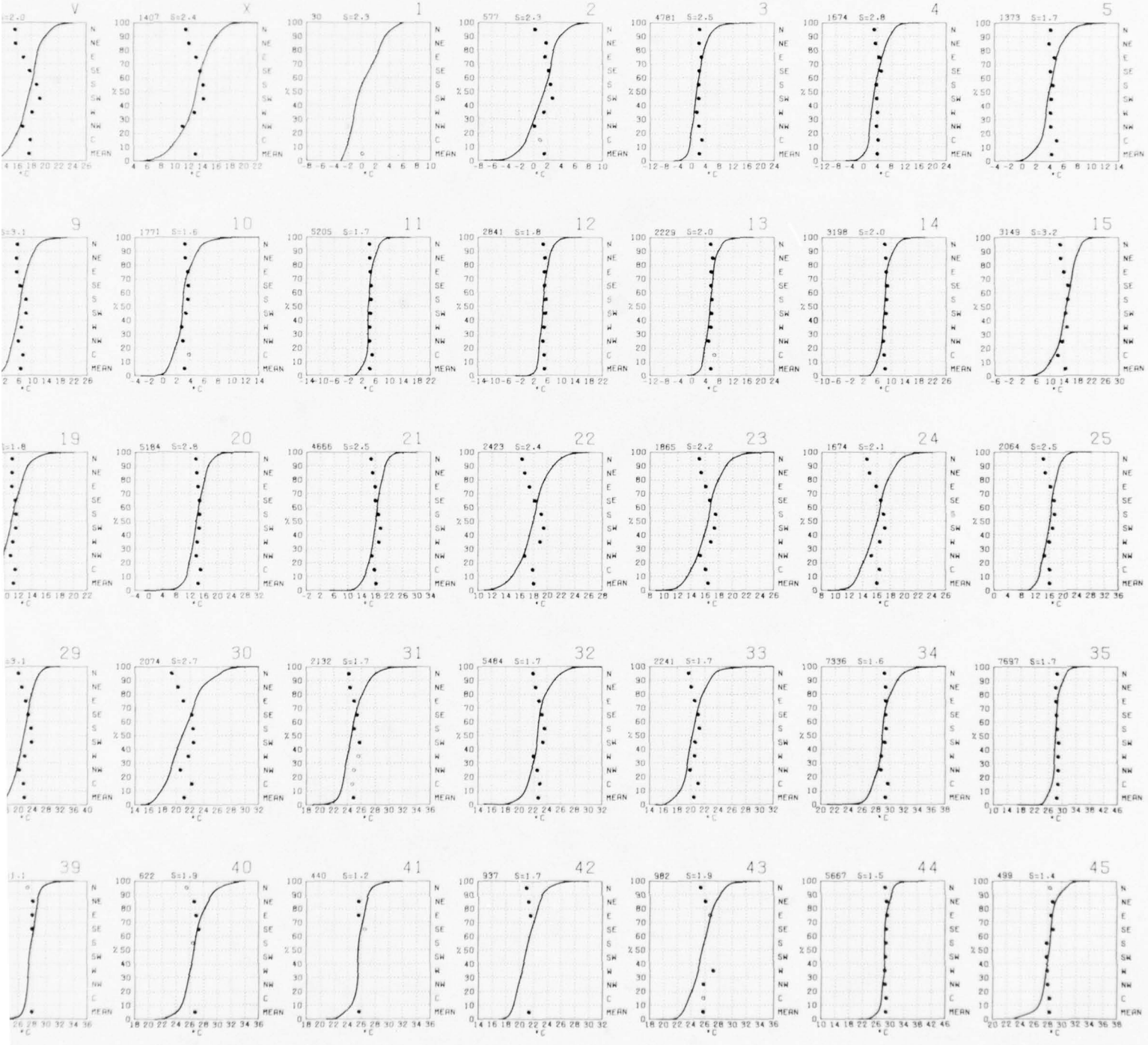


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

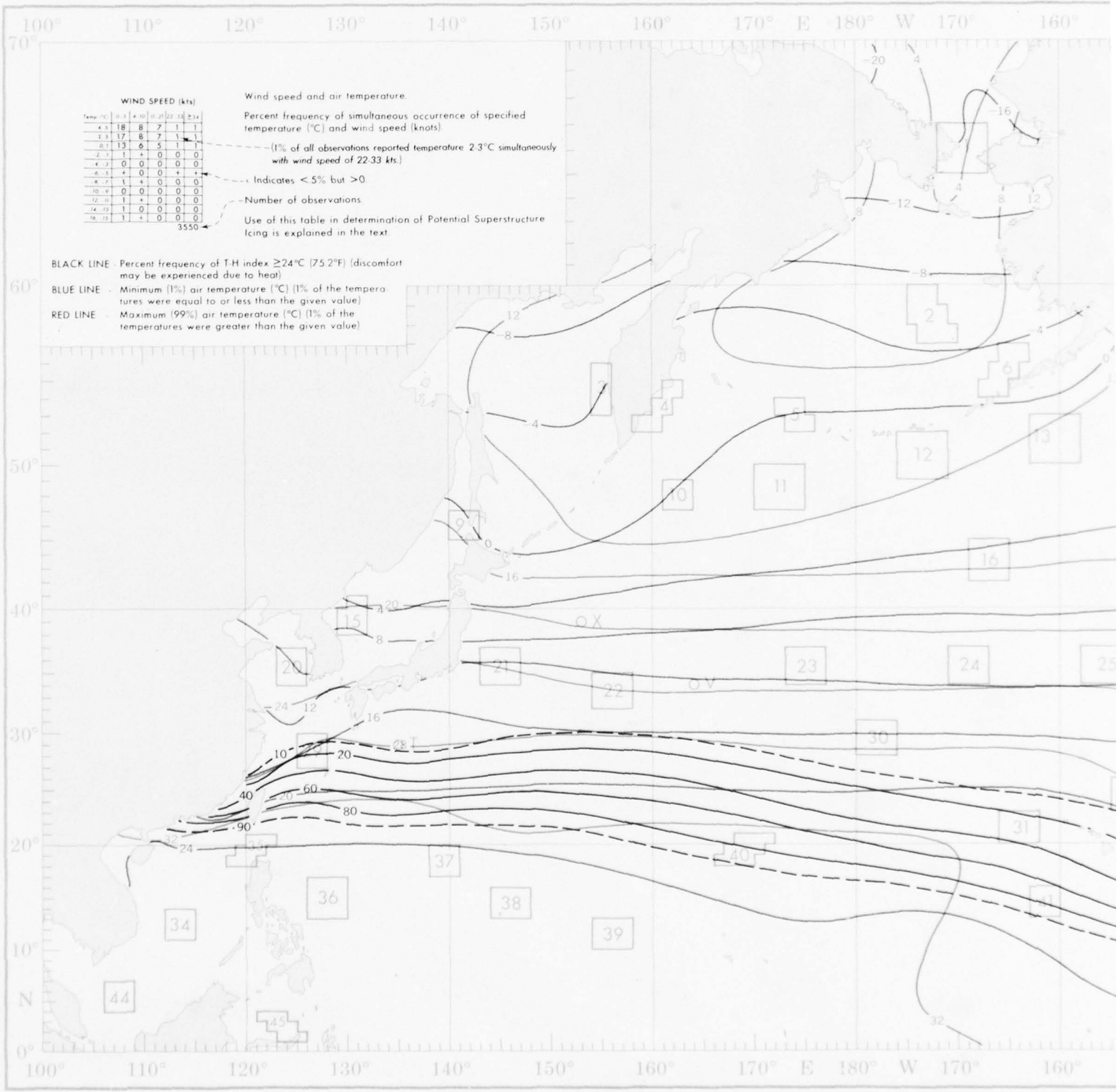
MAY



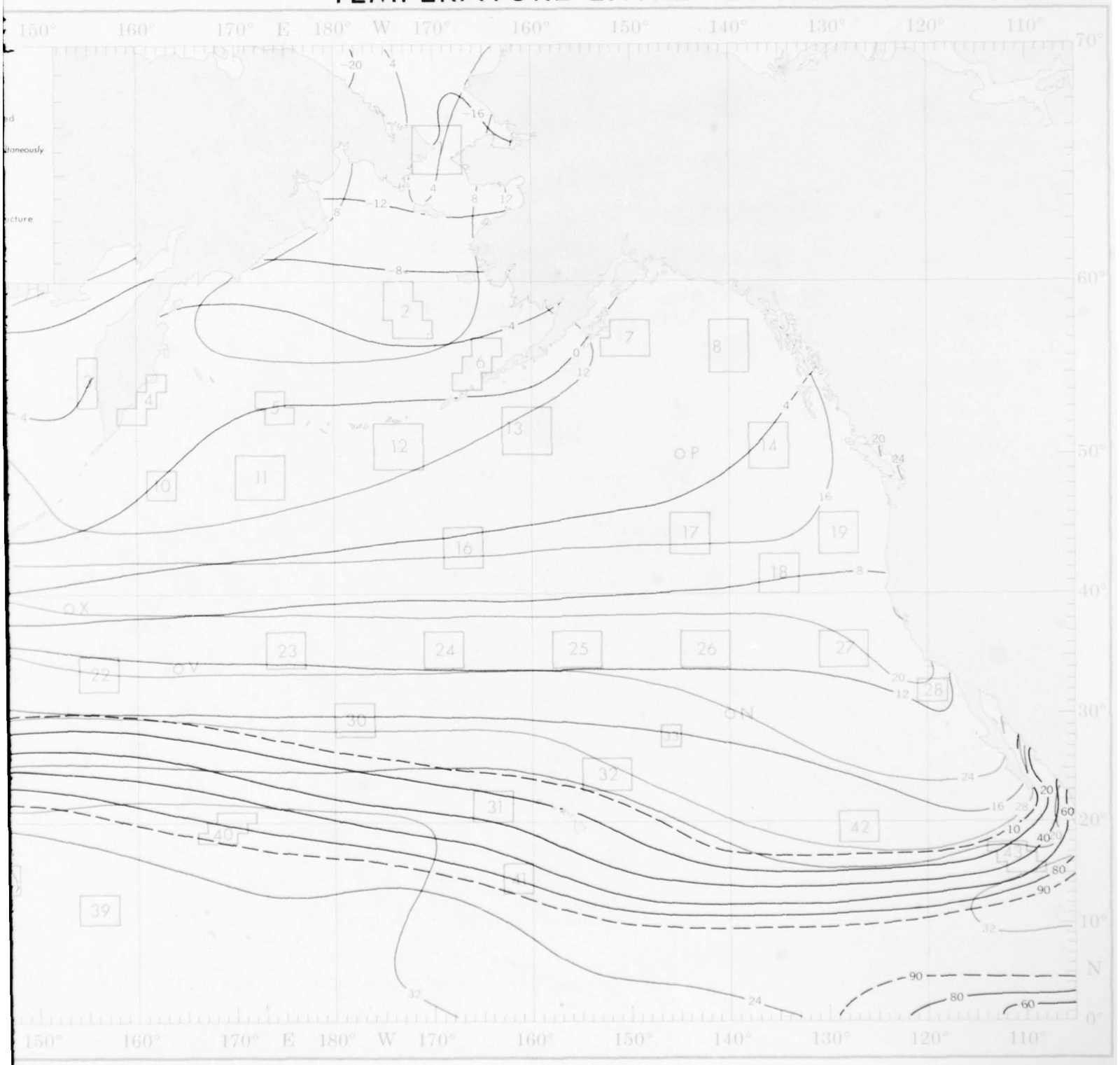
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	+	+	0	0	0
22.23	+	+	+	0	0
20.21	2	6	4	+	0
18.19	5	24	25	2	+
16.17	1	10	18	2	+
14.15	+	+	+	+	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4962

P

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	+	+	0	0
10.11	+	+	1	+	+
8.9	1	5	9	7	1
6.7	2	12	27	17	2
4.5	1	3	6	4	1
2.3	0	+	+	+	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

5820

T

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	1	3	5	2	+
22.23	3	15	30	8	+
20.21	2	7	14	5	+
18.19	+	+	2	2	+
16.17	0	+	+	+	+
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2188

V

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	-	0
22.23	+	1	2	1	+
20.21	1	4	8	1	+
18.19	2	13	20	4	+
16.17	2	10	14	3	+
14.15	1	4	6	2	+
12.13	+	+	1	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

4017

X

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	+ 1	1	1	+
16.17	+	2	6	3	+
14.15	1	6	13	5	+
12.13	1	9	20	7	1
10.11	1	1	8	3	1
8.9	+	1	3	2	1
6.7	+	+	1	1	+
4.5	0	0	+	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1407

1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	10	0	0	0
2.3	3	3	20	0	0
0.1	7	3	0	0	0
-2.-1	0	10	30	3	0
-4.-3	0	0	10	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0
-16.-15	0	0	0	0	0

30

6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	+	+	0	0	0
12.13	+	+	+	+	0
10.11	+	1	+	+	0
8.9	1	2	1	+	0
6.7	2	6	4	1	+
4.5	2	11	12	5	1
2.3	2	9	12	4	1
0.1	1	4	8	3	+
-2.-1	+	1	2	1	+
-4.-3	+	+	1	+	+

4277

7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	1	+	0	0
10.11	1	1	2	+	0
8.9	1	7	7	2	0
6.7	3	10	17	6	+
4.5	2	10	14	5	+
2.3	+	1	2	2	1
0.1	+	0	0	1	+
-2.-1	0	0	0	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

478

8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	+	+	0	0
12.13	+	1	1	0	0
10.11	1	3	3	+	0
8.9	3	11	8	3	+
6.7	4	15	18	4	0
4.5	1	6	8	1	+
2.3	1	1	2	1	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

571

9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	+	+	+	0	0
16.17	+	0	+	+	0
14.15	+	1	1	+	+
12.13	1	1	1	1	0
10.11	2	4	4	+	+
8.9	2	9	8	2	0
6.7	3	11	9	2	0
4.5	3	9	8	2	+
2.3	1	4	5	1	+
+1	+	1	1	+	0

1452

10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	0	+	0	0	0
10.11	+	+	+	0	+
8.9	+	+	1	+	0
6.7	1	3	3	2	0
4.5	1	7	13	5	1
2.3	2	15	27	10	2
0.1	+	2	3	2	+
-2.-1	0	+	0	0	0
-4.-3	0	0	+	0	0
-6.-5	0	0	0	0	0

1771

11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	0	0
12.13	+	+	+	+	0
10.11	+	+	+	+	+
8.9	+	+	2	+	+
6.7	1	6	9	3	+
4.5	2	12	23	10	2
2.3	1	6	11	6	2
0.1	+	+	1	+	+
-2.-1	0	+	+	+	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

5205

16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	+	+	0
16.17	+	+	+	0	0
14.15	+	1	1	+	0
12.13	+	4	6	2	+
10.11	1	9	15	7	1
8.9	1	10	17	8	1
6.7	+	4	6	5	1
4.5	0	1	+	+	0
2.3	0	0	+	0	0

1520

17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.19	0	+	+	0	0
16.17	+	+	1	+	0
14.15	+	1	2	+	+
12.13	1	7	8	2	+
10.11	2	12	16	5	1
8.9	2	11	17	4	1
6.7	+	2	3	1	+
4.5	+	+	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1956

18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	+	0
20.21	0	+	+	0	0
18.19	+	1	+	+	0
16.17	1	3	2	+	0
14.15	1	7	8	1	+
12.13	3	16	18	4	+
10.11	1	9	11	3	1
8.9	+	2	3	2	1
6.7	0	+	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3133

19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	+	1	1	+	0
14.15	1	4	2	+	0
12.13	2	14	15	2	+
10.11	2	14	20	4	+
8.9	1	5	7	3	+
6.7	+	+	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2049

20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	+	0	0
26.27	+	0	+	0	0
24.25	+	+	+	0	0
22.23	+	+	+	+	0
20.21	1	1	+	+	0
18.19	3	5	1	+	+
16.17	5	13	4	1	+
14.15	5	16	6	1	+
12.13	4	15	5	1	+
10.11	2	6	2	+	0
+9	1	1	1	+	0

5185

21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	0	+	0
26.27	0	+	+	0	0
24.25	+	+	+	+	0
22.23	+	2	3	1	+
20.21	1	6	11	4	1
18.19	2	11	16	5	1
16.17	1	8	10	4	1
14.15	+	3	4	2	+
12.13	+	1	1	1	+
+11	0	+	+	+	+

4669

26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	+	0	0
22.23	+	+	+	+	0
20.21	+	2	1	+	0
18.19	1	8	8	1	0
16.17	3	17	17	3	+
14.15	2	10	10	1	+
12.13	1	4	5	2	+
10.11	+	+	+	+	+
8.9	0	+	+	+	0
6.7	0	0	0	0	0

2640

27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	0	0	0
22.23	+	+	+	0	0
20.21	+	1	1	+	0
18.19	+	2	3	+	0
16.17	1	10	11	2	+
14.15	2	10	18	4	+
12.13	1	8	16	5	+
10.11	+	1	2	1	+
8.8	0	+	+	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

5721

28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	0	0	+	0	0
22.23	+	+	+	0	0
20.21	+	1	+	+	0
18.19	1	3	3	+	0
16.17	3	12	11	1	+
14.15	2	17	22	3	+
12.13	1	5	10	3	+
10.11	+	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

5349

29

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.29	+	+	1	+	0
26.27	1	3	4	+	0
24.25	1	8	9	1	+
22.23	1	12	11	2	+
20.21	1	10	8	2	+
18.19	1	7	5	1	+
16.17	+	3	2	1	0
14.15	+	1	1	+	0
12.13	+	+	+	+	0
10.11	0	+	0	+	0

5058

30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	1	1	+	0	0
26.27	2	3	1	0	0
24.25	2	5	3	+	0
22.23	3	13	10	1	0
20.21	3	12	11	1	+
18.19	1	8	12	2	0
16.17	+	1	4	1	+
14.15	0	+	+	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2075

31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	1	0	0
28.29	+	3	3	+	0
26.27	2	10	13	+	0
24.25	2	15	26	2	+
22.23	+	5	12	1	+
20.21	+	+	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2132

36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	1	2	1	+	0
30.31	1	11	6	+	0
28.29	4	35	19	1	0
26.27	1	9	5	+	+
24.25	+	1	1	+	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

3691

37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	2	1	+	0
30.31	1	6	5	+	0
28.29	4	27	19	1	0
26.27	3	15	13	+	0
24.25	+	1	1	0	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

913

38

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	+	+	0	0
32.33	+	2	1	0	0
30.31	1	6	5	+	0
28.29	2	24	31	1	0
26.27	1	10	14	1	+
24.25	+	+	+	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2002

39

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	1	0	0
30.31	+	1	3	0	0
28.29	+	15	42	5	0
26.27	+	9	18	4	0
24.25	+	+	+	0	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2173

40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	1	2	0	0
30.31	0	1	4	+	0
28.29	1	8	11	+	0
26.27	1	17	31	3	0
24.25	1	5	10	2	0
22.23	+	+	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

622

41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	1	0	0
28.29	0	2	3	0	0
26.27	+	14	33	7	0
24.25	1	10	24	4	0
22.23	+	+	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

440

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

MPERATURE

MAY

V

WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34
	0	0	+	+	0
	+	1	2	1	+
	1	4	8	1	+
	2	13	20	4	+
	2	10	14	3	+
	1	4	6	2	+
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

4017

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	1	1	1	+
16.17	+	2	5	3	+
14.15	1	6	13	5	+
12.13	1	9	20	7	1
10.11	1	1	8	3	1
8.9	+	1	3	2	1
6.7	+	+	1	1	+
4.5	0	0	+	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1407

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	10	0	0	0
2.3	3	3	20	0	0
0.1	7	3	0	0	0
-2.-1	0	10	30	3	0
-4.-3	0	0	10	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0
-16.-15	0	0	0	0	0

30

2

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	1	1	0	0
6.7	+	1	1	+	0
4.5	2	5	7	2	+
2.3	1	11	17	6	1
0.1	1	10	11	5	1
-2.-1	1	4	7	2	+
-4.-3	+	1	1	1	0
-6.-5	0	+	0	0	0
-8.-7	0	+	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

577

3

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	+	+	0	0	0
14.15	0	+	+	0	0
12.13	+	+	+	+	0
10.11	+	+	+	0	0
8.9	1	1	+	+	0
6.7	2	3	1	+	+
4.5	4	7	4	1	+
2.3	6	12	10	3	+
0.1	5	13	12	4	+
-1	1	3	3	1	+

4784

4

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	0	0	0	0
12.13	1	+	0	0	0
10.11	1	2	+	0	0
8.9	4	3	1	0	0
6.7	6	7	2	+	0
4.5	8	9	5	1	+
2.3	9	13	9	2	+
0.1	3	5	5	1	+
-2.-1	+	+	1	+	+
-4.-3	0	+	+	0	0
-6.-5	0	0	0	0	0

1674

5

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	0	0
10.11	+	1	+	0	0
8.8	1	2	1	+	0
6.7	4	6	4	1	+
4.5	4	18	20	6	1
2.3	2	10	10	4	1
0.1	0	1	1	1	+
-2.-1	0	+	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1373

9

WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34
	+	+	+	0	0
	+	0	+	0	0
	+	1	1	+	+
	2	4	4	+	+
	2	9	8	2	0
	3	11	9	2	0
	3	9	8	2	+
	1	4	5	1	+
	+	1	1	+	0

1452

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	0	0
12.13	0	+	0	0	0
10.11	+	+	+	0	0
8.9	+	+	1	+	0
6.7	1	3	3	2	0
4.5	1	7	13	5	1
2.3	2	15	27	10	2
0.1	+	2	3	2	+
-2.-1	0	+	0	0	0
-4.-3	0	0	+	0	0
-6.-5	0	0	0	0	0

1771

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	0	0
12.13	+	+	+	+	0
10.11	+	+	+	+	+
8.9	+	2	2	+	+
6.7	1	6	9	3	+
4.5	2	12	23	10	2
2.3	1	6	11	6	2
0.1	+	+	1	+	+
-2.-1	0	+	+	+	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

5205

12

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	0	0
14.15	0	+	0	0	0
12.13	+	+	+	0	0
10.11	+	1	1	+	+
8.9	+	3	3	1	+
6.7	1	9	14	7	2
4.5	2	12	21	10	2
2.3	1	3	4	2	1
0.1	+	+	+	+	0
-2.-1	0	+	+	0	0
-4.-3	0	0	0	0	0

2843

13

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	+	+	+	0	0
12.13	+	+	+	0	0
10.11	+	1	2	+	0
8.9	1	4	5	1	+
6.7	1	11	19	9	1
4.5	1	9	14	7	1
2.3	1	2	4	2	+
0.1	0	+	+	+	+
-2.-1	0	+	+	0	0
-4.-3	0	0	0	0	0

2230

14

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	+	0	0
14.15	+	+	+	+	0
12.13	+	2	2	+	0
10.11	1	9	8	1	+
8.9	2	15	20	6	1
6.7	1	8	12	5	+
4.5	+	1	2	1	+
2.3	0	+	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

3199

15

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	+	0	0
22.23	+	1	+	0	0
20.21	+	1	1	+	+
18.19	1	5	7	1	+
16.17	1	9	14	2	+
14.15	1	8	13	+	0
12.13	2	8	8	1	0
10.11	1	4	2	+	0
8.8	1	3	1	+	0
6.7	+	1	+	+	0
≤5	+	+	+	0	0

3149

19

WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34
	0	0	+	0	0
	+	1	1	+	0
	1	4	2	+	0
	2	14	15	2	+
	2	14	20	4	+
	1	5	7	3	+
	+	+	+	+	+
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

2049

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	+	0	0
26.27	+	0	+	0	0
24.25	+	+	+	0	0
22.23	+	+	+	+	0
20.21	1	1	+	+	0
18.19	3	5	1	+	+
16.17	5	13	4	1	+
14.15	5	16	6	1	+
12.13	4	15	5	1	+
10.11	2	6	2	+	0
49	1	1	1	+	0

5185

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	0	0	+	0
26.27	0	+	+	0	0
24.25	+	+	+	+	0
22.23	+	2	3	1	+
20.21	1	6	11	4	1
18.19	2	11	16	5	1
16.17	1	8	10	4	1
14.15	+	3	4	2	+
12.13	+	1	1	1	+
411	0	+	+	+	+

4669

22

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	+	1	1	+	0
22.23	+	2	3	1	+
20.21	1	5	10	3	+
18.19	1	10	19	6	1
16.17	1	7	13	4	1
14.15	+	2	4	2	+
12.13	+	1	1	1	+
10.11	+	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2423

23

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	1	+	0	0
20.21	+	3	3	1	0
18.19	1	10	10	1	+
16.17	1	15	20	4	+
14.15	1	7	8	3	+
12.13	1	2	3	2	+
10.11	0	+	+	+	0
8.8	0	0	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1865

24

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	1	+	0	0
20.21	+	2	2	+	+
18.19	1	9	9	1	+
16.17	2	15	18	3	0
14.15	1	8	12	2	+
12.13	+	4	5	1	+
10.11	0	+	+	+	0
8.9	0	0	+	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1675

25

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	+	0	0
22.23	0	1	+	+	0
20.21	1	3	3	+	0
18.19	1	10	9	2	+
16.17	3	13	16	2	+
14.15	2	7	9	2	+
12.13	1	3	6	2	+
10.11	+	+	1	1	0
8.8	0	0	+	+	0
6.7	0	0	+	0	0

2067

29

WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34
	+	+	+	0	0
	+	+	+	0	0
	1	3	4	+	0
	1	8	9	1	+
	1	12	11	2	+
	1	10	8	2	+
	1	7	5	1	+
	+	3	2	1	0
	+	1	1	+	0
	+	+	+	+	0
	0	+	0	+	0

5058

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	1	1	+	0	0
26.27	2	3	1	0	0
24.25	2	5	3	+	0
22.23	3	13	10	1	0
20.21	3	12	11	1	+
18.19	1	8	12	2	0
16.17	+	1	4	1	+
14.15	0	+	+	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2075

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	1	1	0	0
28.29	+	3	3	+	0
26.27	2	10	13	+	0
24.25	2	15	28	2	+
22.23	+	5	12	1	+
20.21	+	+	1	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2132

32

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	+	1	+	0
26.27	+	2	3	+	0
24.25	1	6	12	1	0
22.23	2	15	33	4	0
20.21	1	5	11	1	0
18.19	+	1	1	+	0
16.17	0	+	+	0	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

5495

33

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	0	+	+	0	0
26.27	+	1	+	0	0
24.25	+	2	1	+	0
22.23	2	11	9	+	0
20.21	2	18	25	1	+
18.19	1	9	14	1	0
16.17	+	1	1	+	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2241

34

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	+	+	+	0
34.35	+	1	+	+	0
32.33	1	4	2	+	0
30.31	4	19	8	1	+
28.29	7	30	13	2	+
26.27	1	4	2	1	+
24.25	+	+	+	+	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

7341

35

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	1	3	1	+	0
30.31	3	11	5	1	+
28.29	7	24	17	3	+
26.27	2	9	8	3	+
24.25	+	1	1	1	+
22.23	+	+	+	0	0
20.21	+	+	0	0	0
18.19	+	+	0	0	0
16.17	0	0	0	0	0

7710

39

WIND SPEED (KTS)					
	0-3	4-10	11-21	22-33	≥ 34
	0	0	+	0	0
	+	1	1	0	0
	+	1	3	0	0
	+	15	42	5	0
	+	9	18	4	0
	+	+	+	0	0
	0	0	+	0	0
	0	0	0	0	0
	0	0	0	0	0
	0	0	0	0	0

2173

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	1	2	0	0
30.31	0	1	4	+	0
28.29	1	8	11	+	0
26.27	1	17	31	3	0
24.25	1	5	10	2	0
22.23	+	+	1	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

622

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	1	0	0
28.29	0	2	3	0	0
26.27	+	14	33	7	0
24.25	1	10	24	4	0
22.23	+	+	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

440

42

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	0	1	1	0	0
24.25	0	3	5	+	0
22.23	1	10	22	1	0
20.21	+	13	27	3	0
18.19	+	4	9	1	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

938

43

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	0	0	0
30.31	1	1	1	0	0
28.29	3	10	4	+	0
26.27	3	25	10	+	0
24.25	2	18	11	+	0
22.23	1	6	4	0	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

983

44

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	0	+	0	0
36.37	+	+	0	0	0
34.35	+	1	+	0	0
32.33	1	2	1	0	0
30.31	6	14	3	+	0
28.29	17	37	6	+	0
26.27	2	6	2	+	0
24.25	+	1	+	+	0
22.23	+	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0

5696

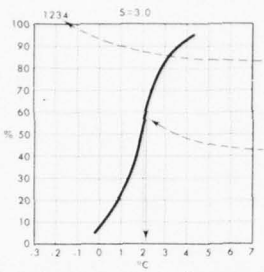
45

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	1	1	+	0	0
30.31	3	7	+	0	0
28.29	23	39	2	0	0
26.27	6	12	2	0	0
24.25	1	1	+	0	0
22.23	+	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
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12.13	0	0	0	0	0

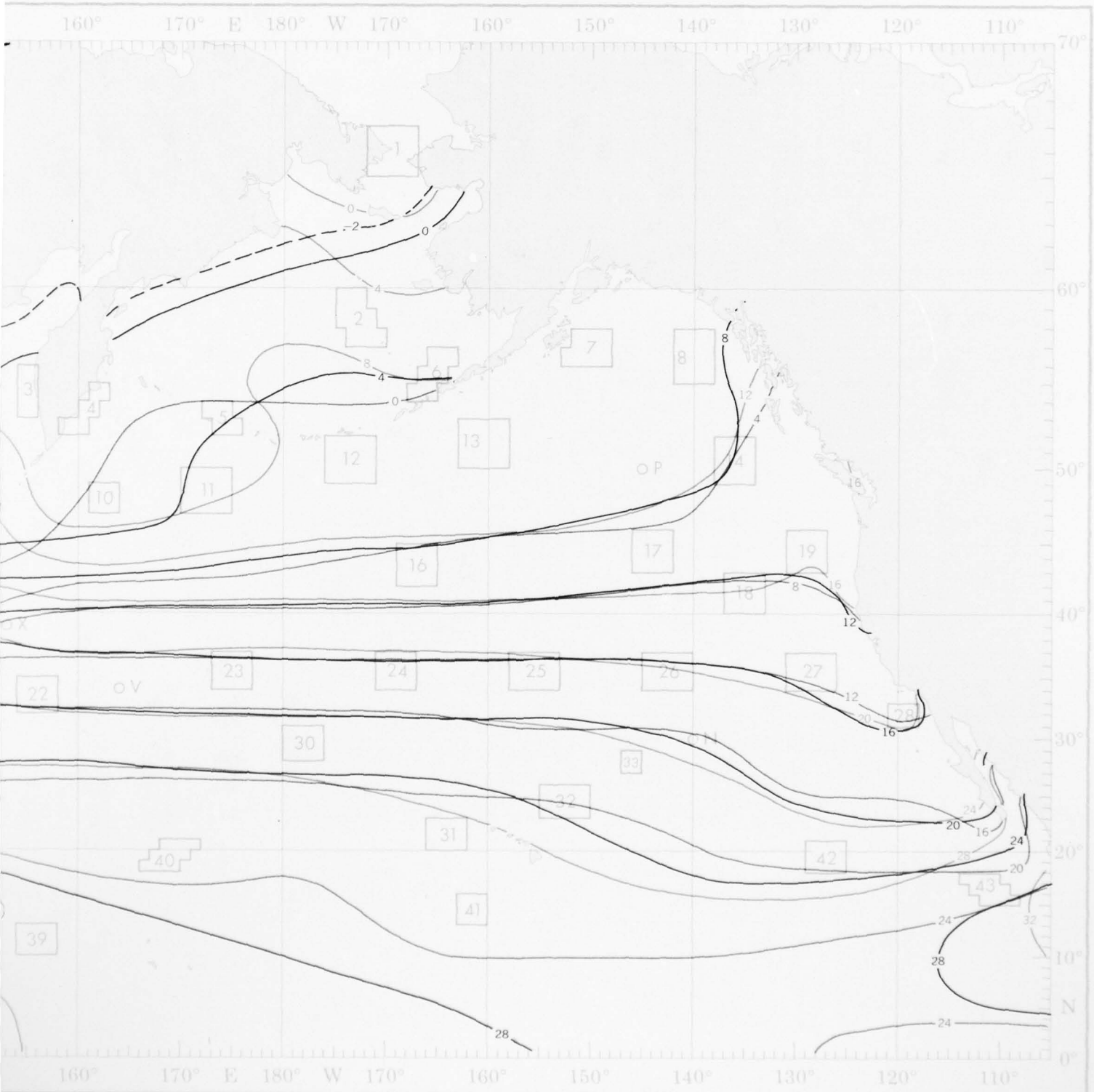
504

ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

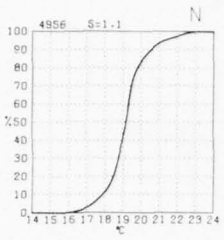
MAY

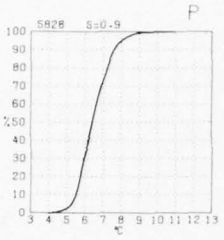

1234
S=3.0
Sea surface temperature.
Number of observations.
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.
(60% of all observed sea surface temperatures were ≤21°C or ≤35.8°F.)
S - Standard deviation of sea surface temperatures (°C).
BLACK LINE - Mean sea surface temperature (°C)
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

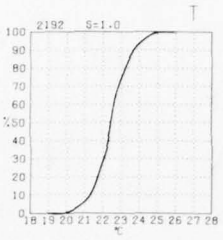
SEA SURFACE TEMPERATURE

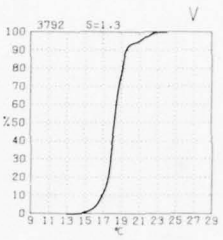


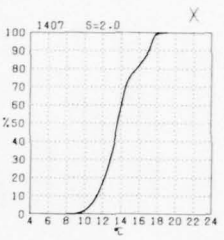
SEA SURFACE TEMPERATURE



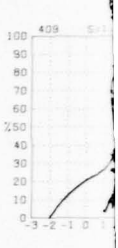


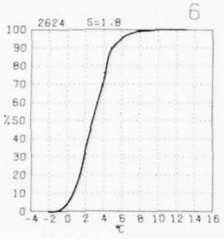


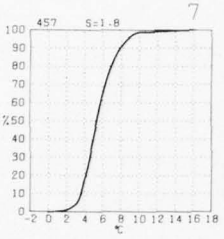


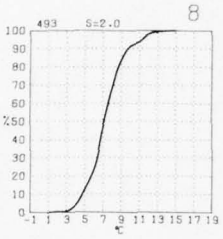


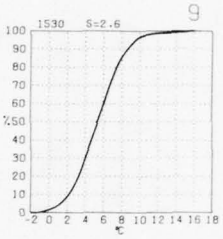
INSUFFICIENT DATA

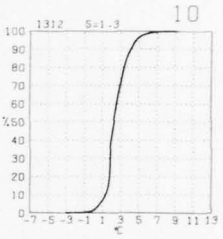


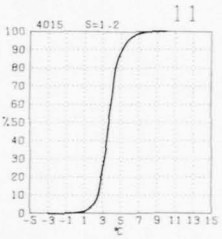


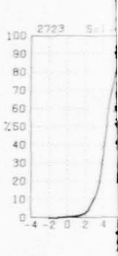


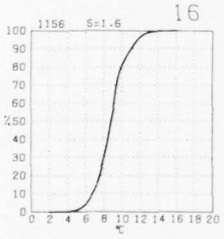


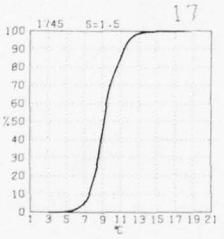


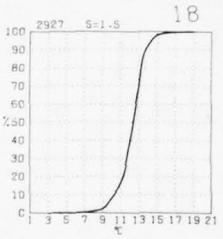


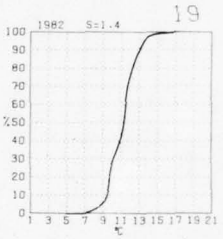


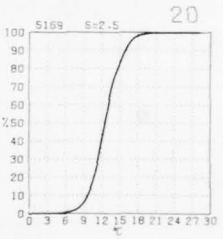


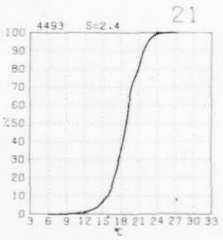


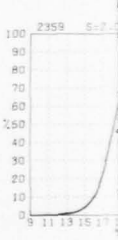


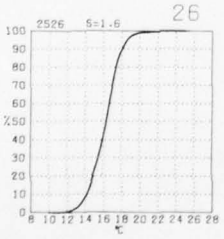


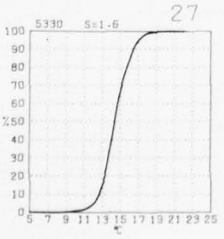


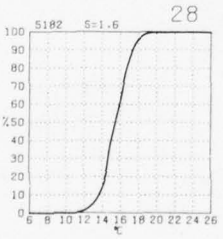


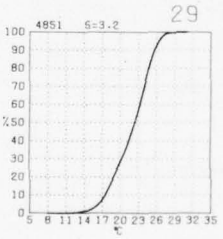


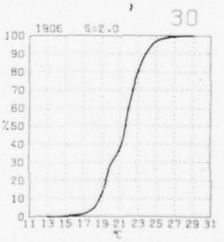


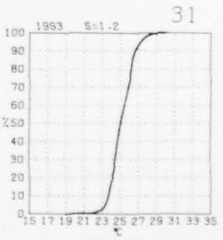


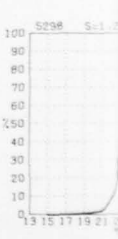


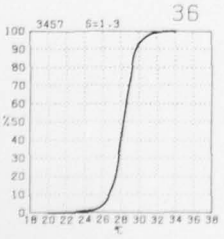


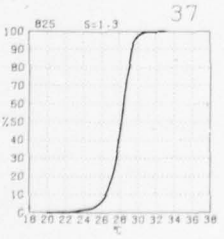


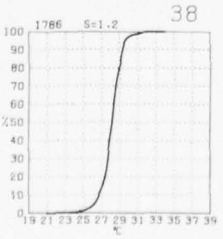


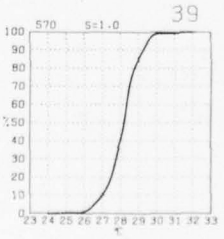


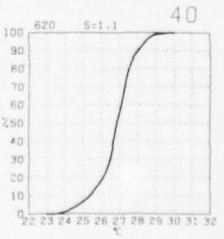


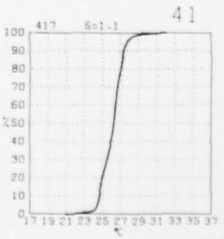


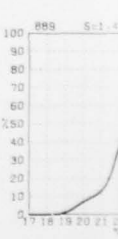








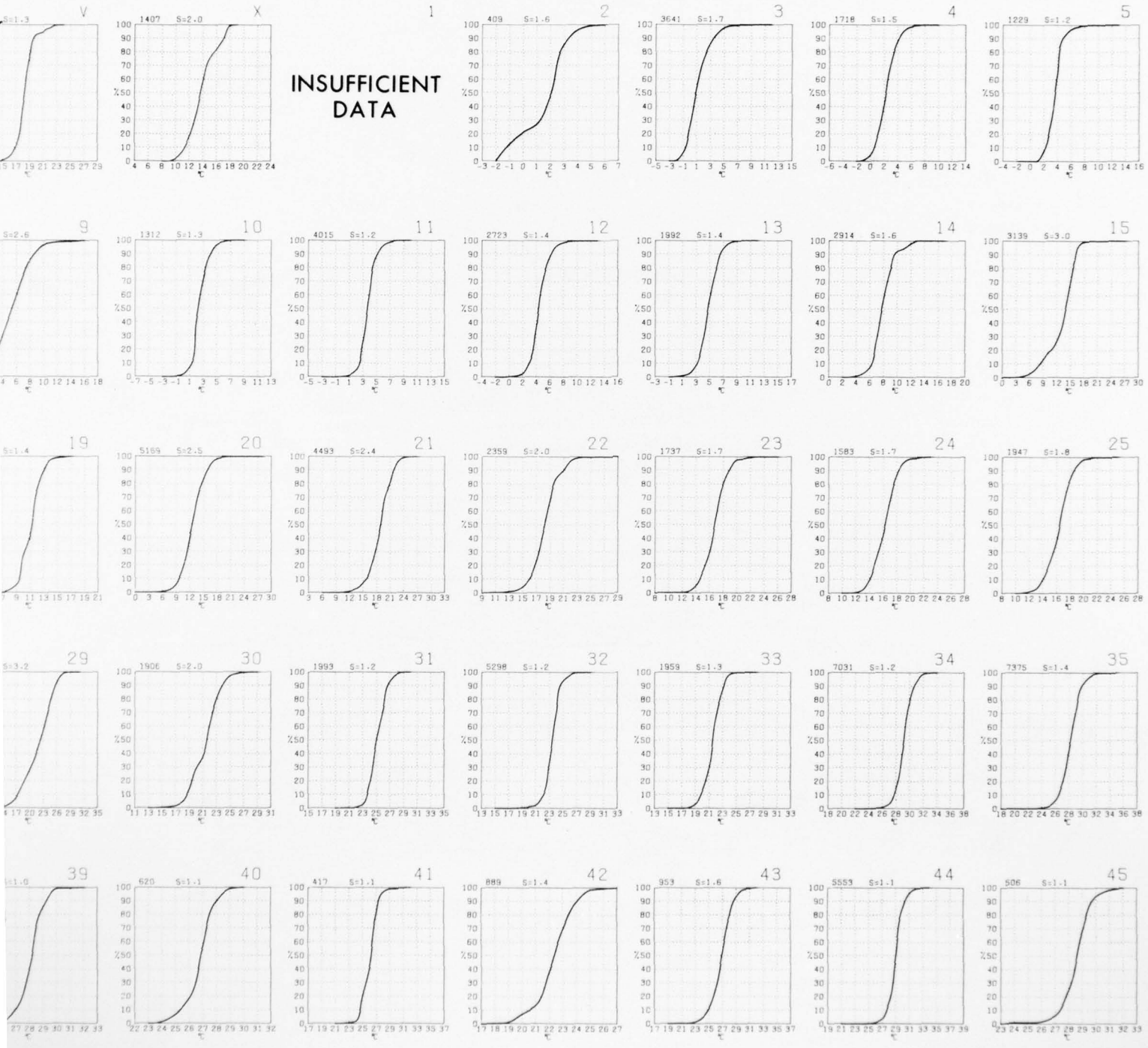




Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

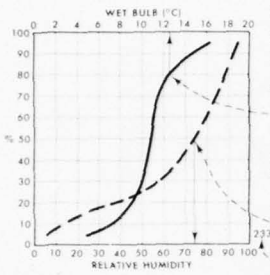
E

MAY



he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY



Wet bulb - Relative humidity

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

(*80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.*)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

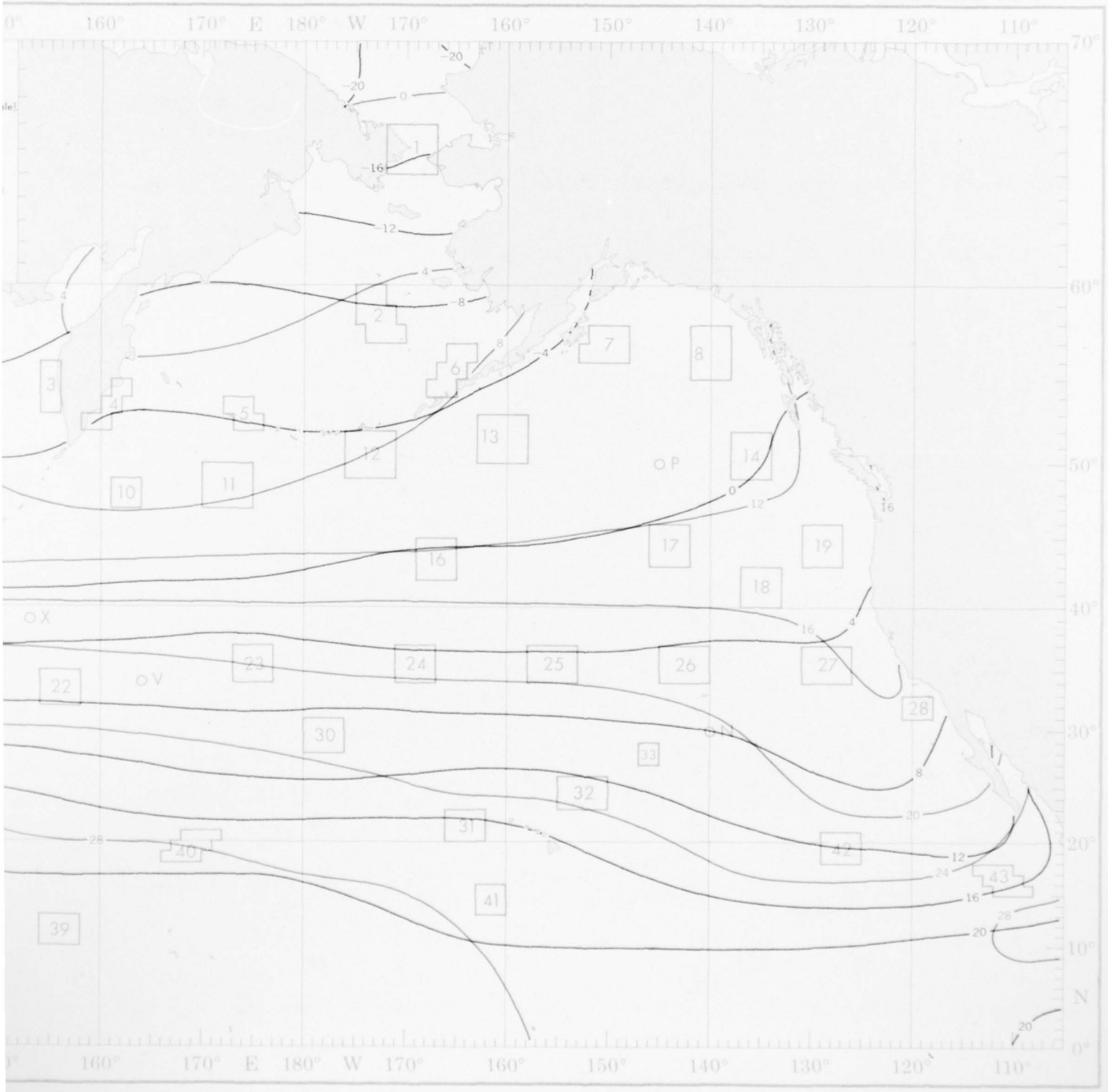
(*50% of all observed relative humidities were ≤74%.*)

Number of observations.

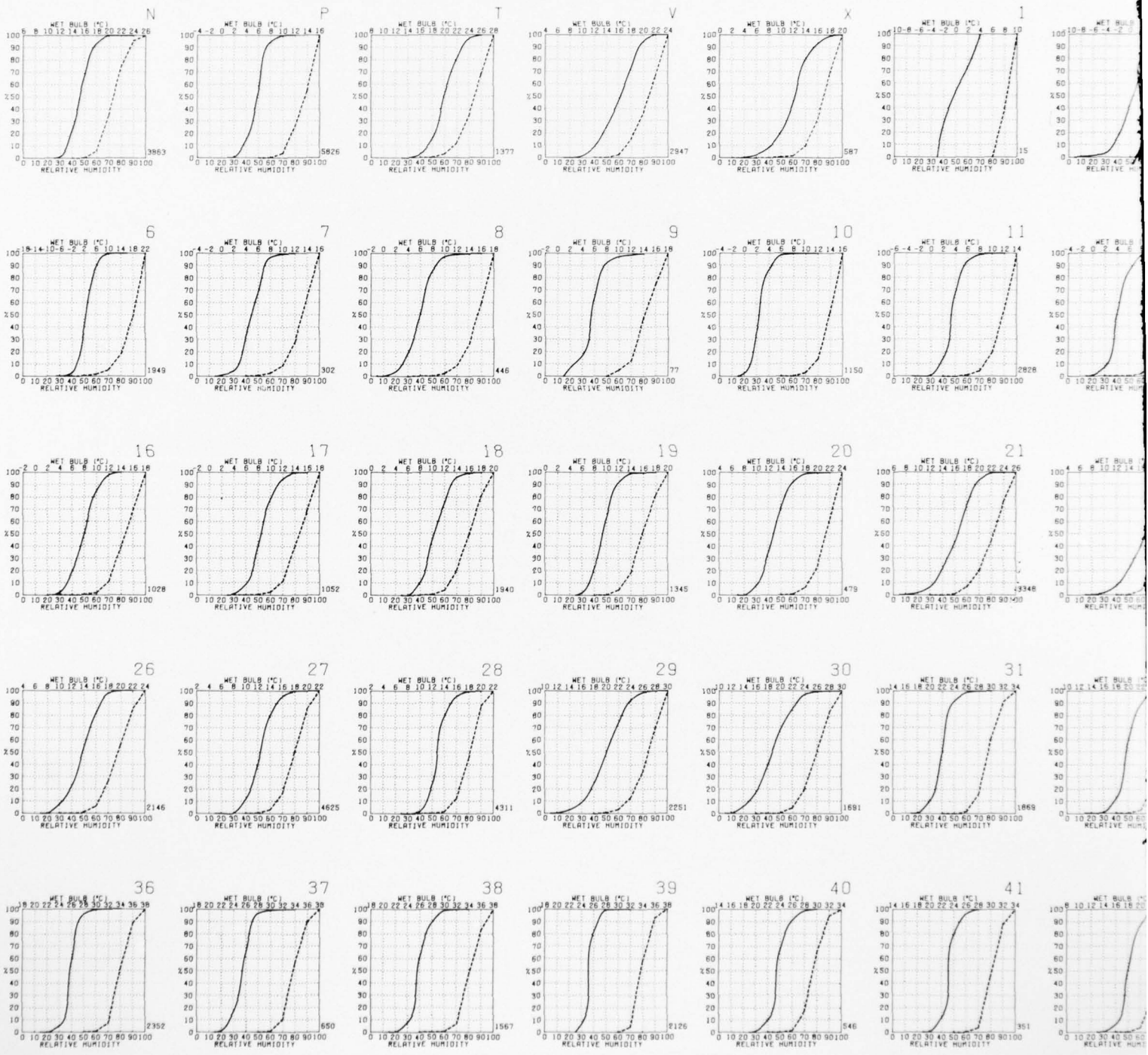
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

HUMIDITY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
N
0°
-20
0
-16
-12
4
-8
8
12
16
20
24
28
1
2
3
4
5
6
7
8
10
11
12
13
14
16
17
18
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O P
O X
O V

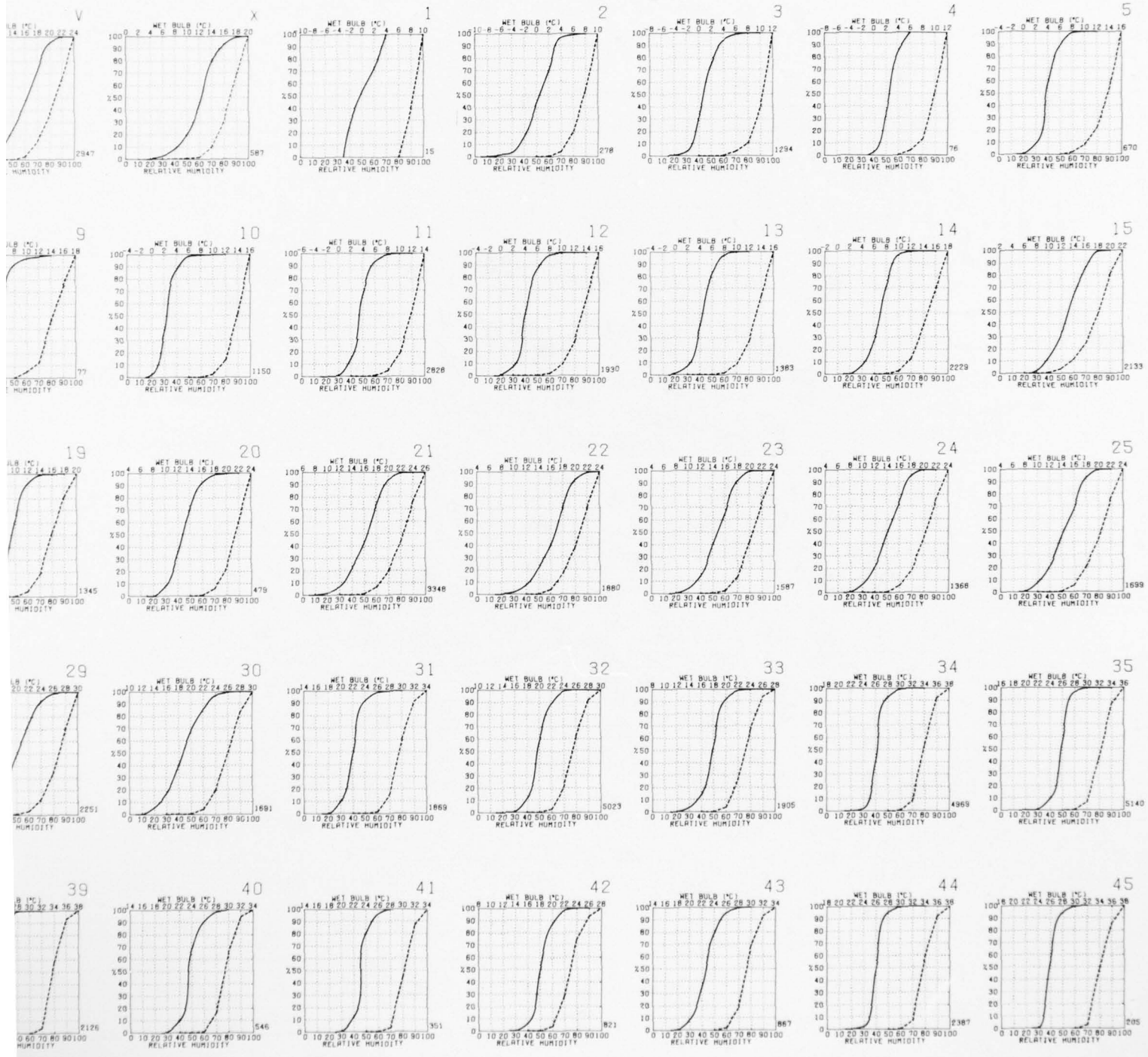
WET BULB AND RELATIVE HUMIDITY



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

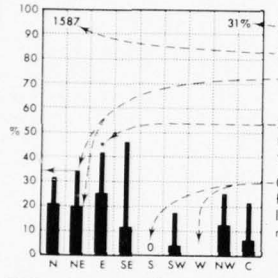
JMIDITY

MAY



e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY



Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.

Percentage of present weather observations reporting precipitation.

Number of observations.

(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)

An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).

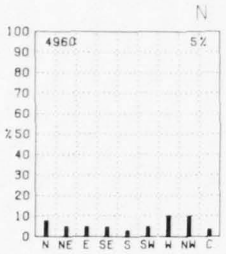
BLUE LINE - Percent frequency of precipitation observations reporting snow

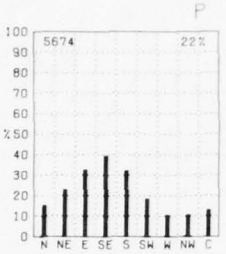
RED LINE - Percent frequency of observations reporting precipitation

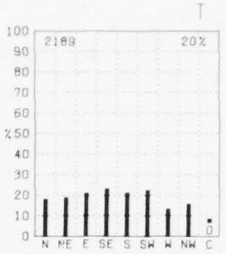
PRECIPITATION

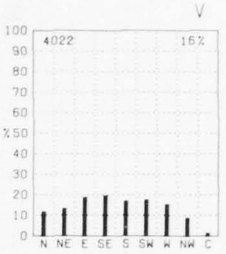


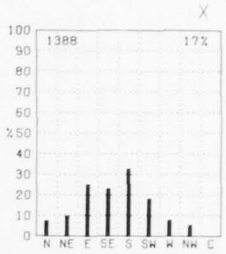
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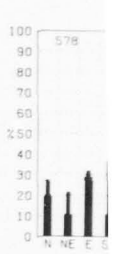


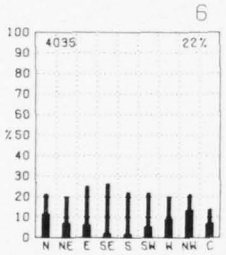


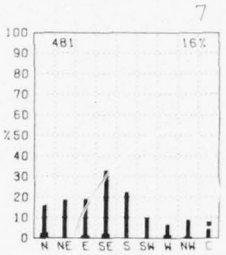


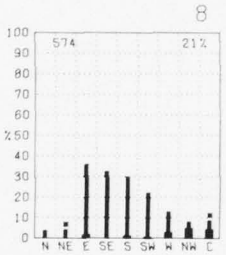


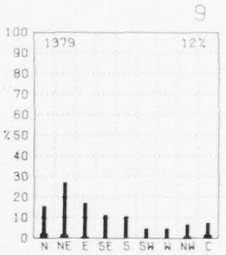
INSUFFICIENT DATA

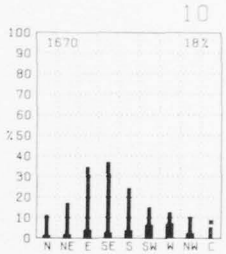


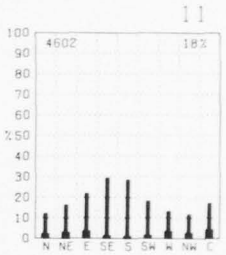


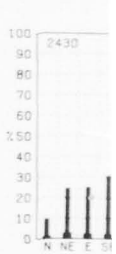


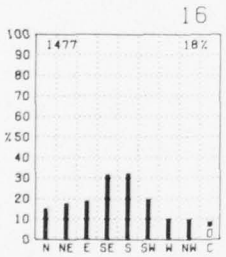


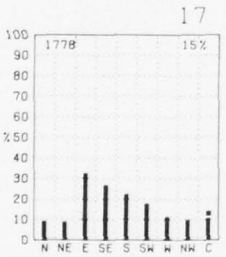


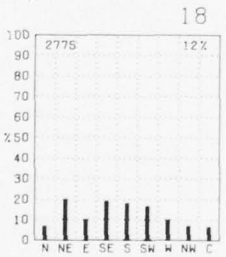


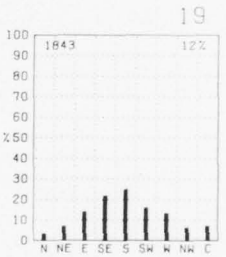


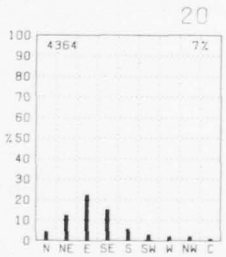


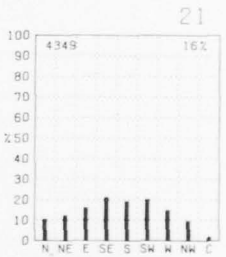


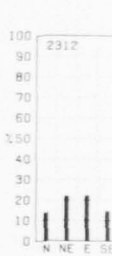


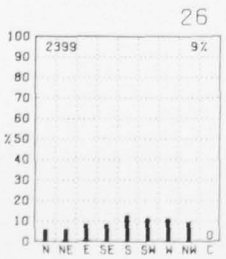


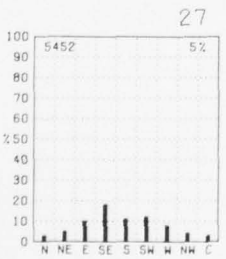


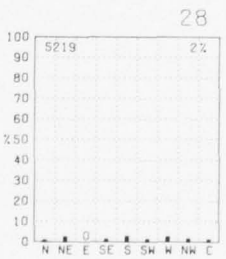


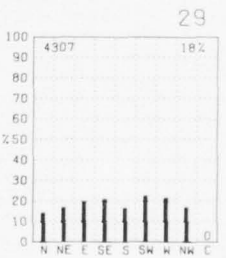


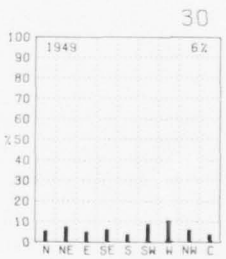


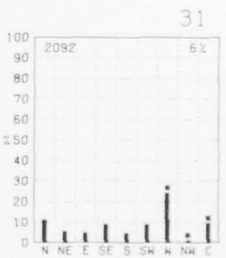


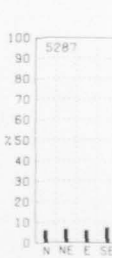


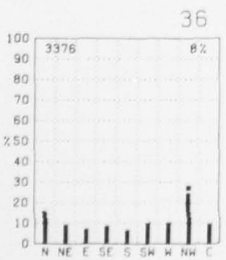


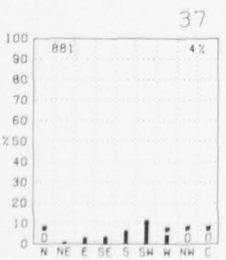


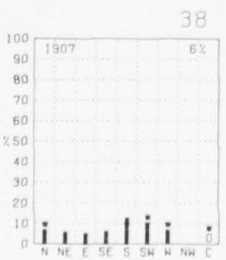


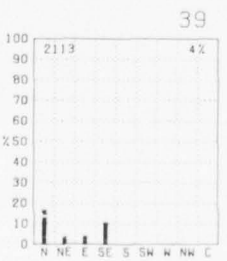


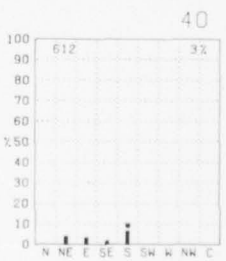


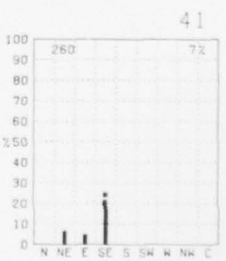


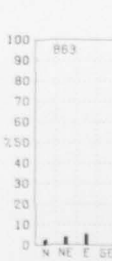






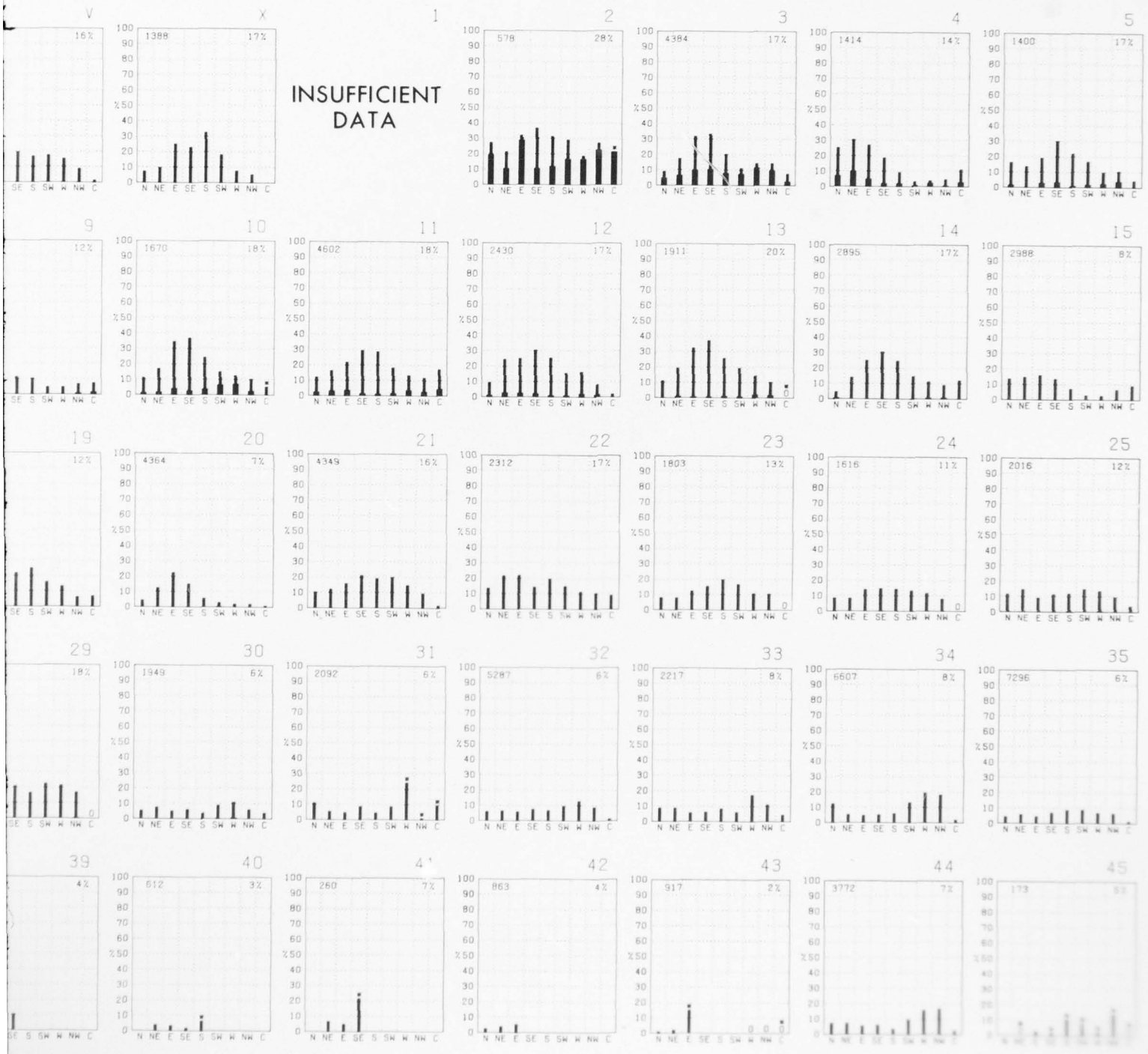






Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

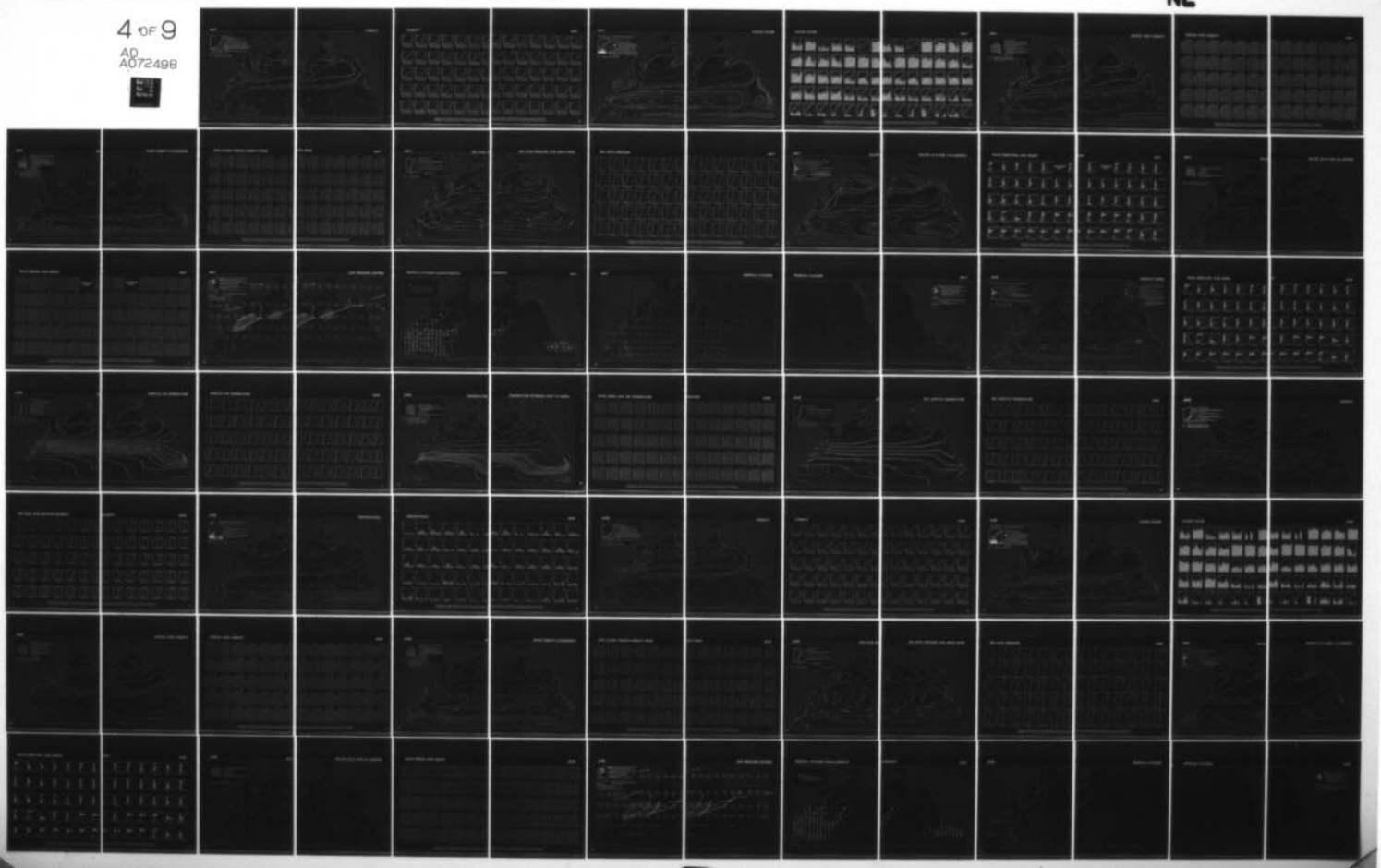
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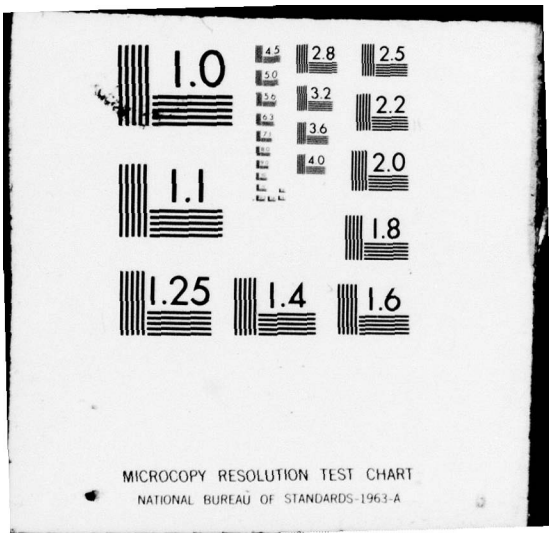


e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

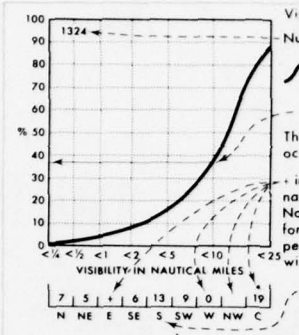
AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
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NATIONAL BUREAU OF STANDARDS-1963-A

MAY



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

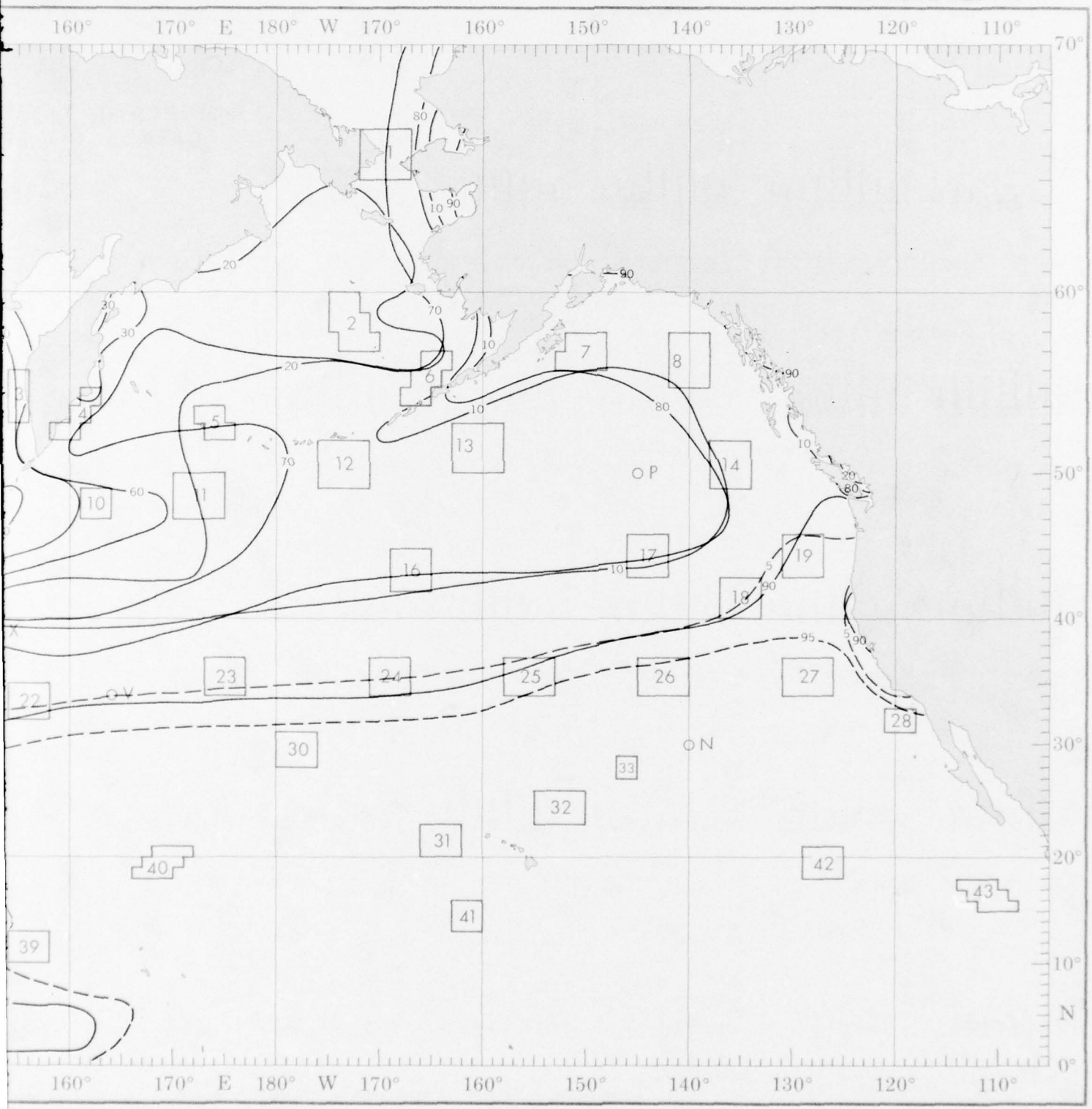
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

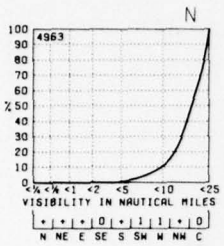
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

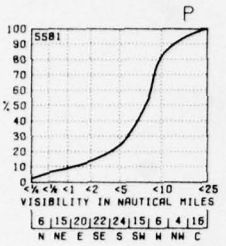
RED LINE - Percent frequency of visibilities <2 nautical miles

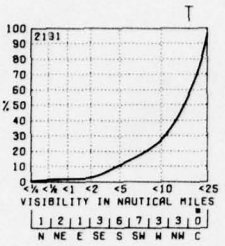
VISIBILITY

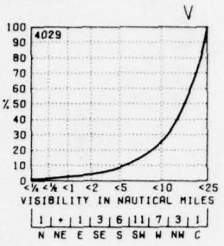

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
OP OV ON
80 90 10 20 30 70 60 95 5

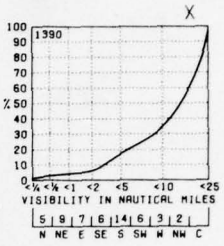
VISIBILITY

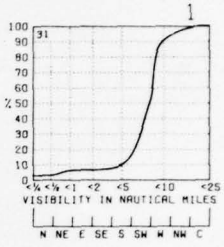


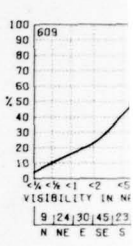


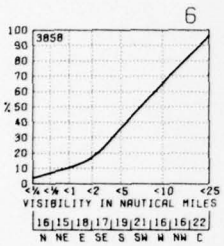


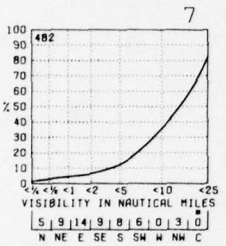


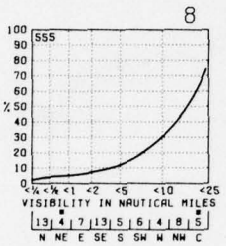


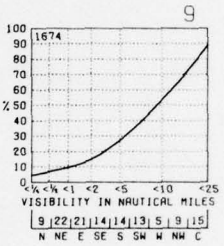


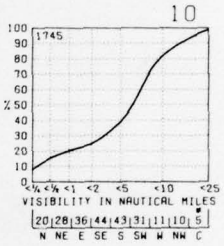


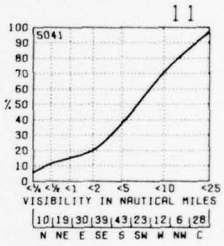


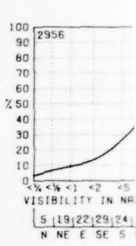


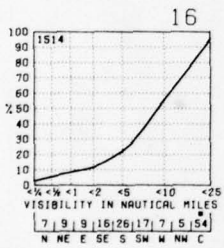


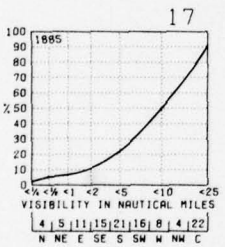


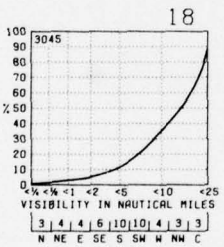


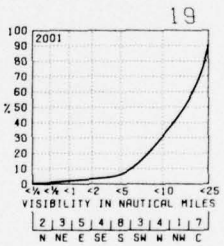


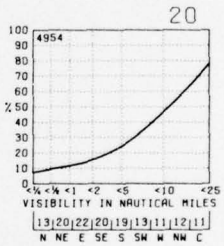


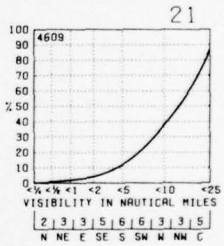


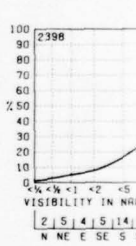


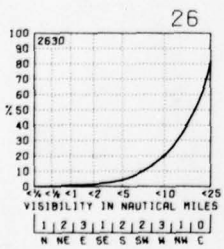


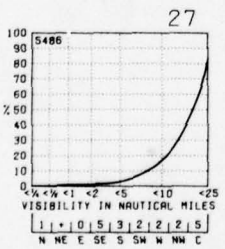


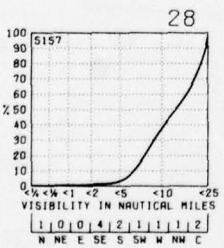


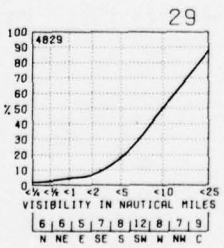


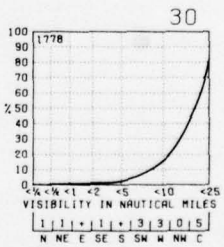


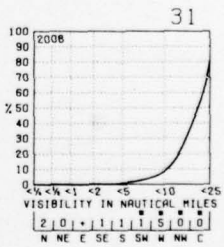


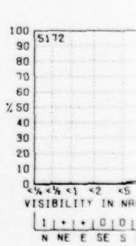


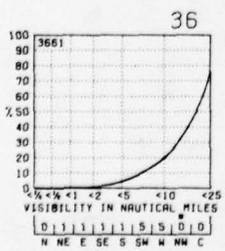


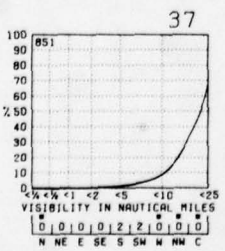


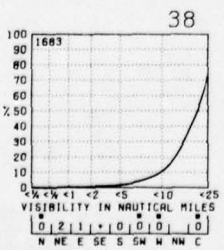


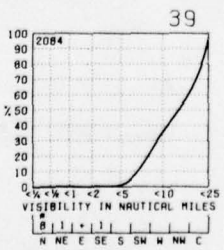


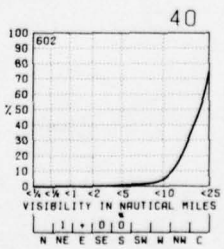


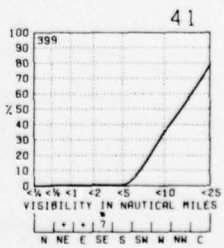


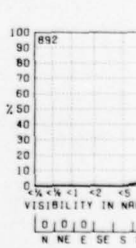






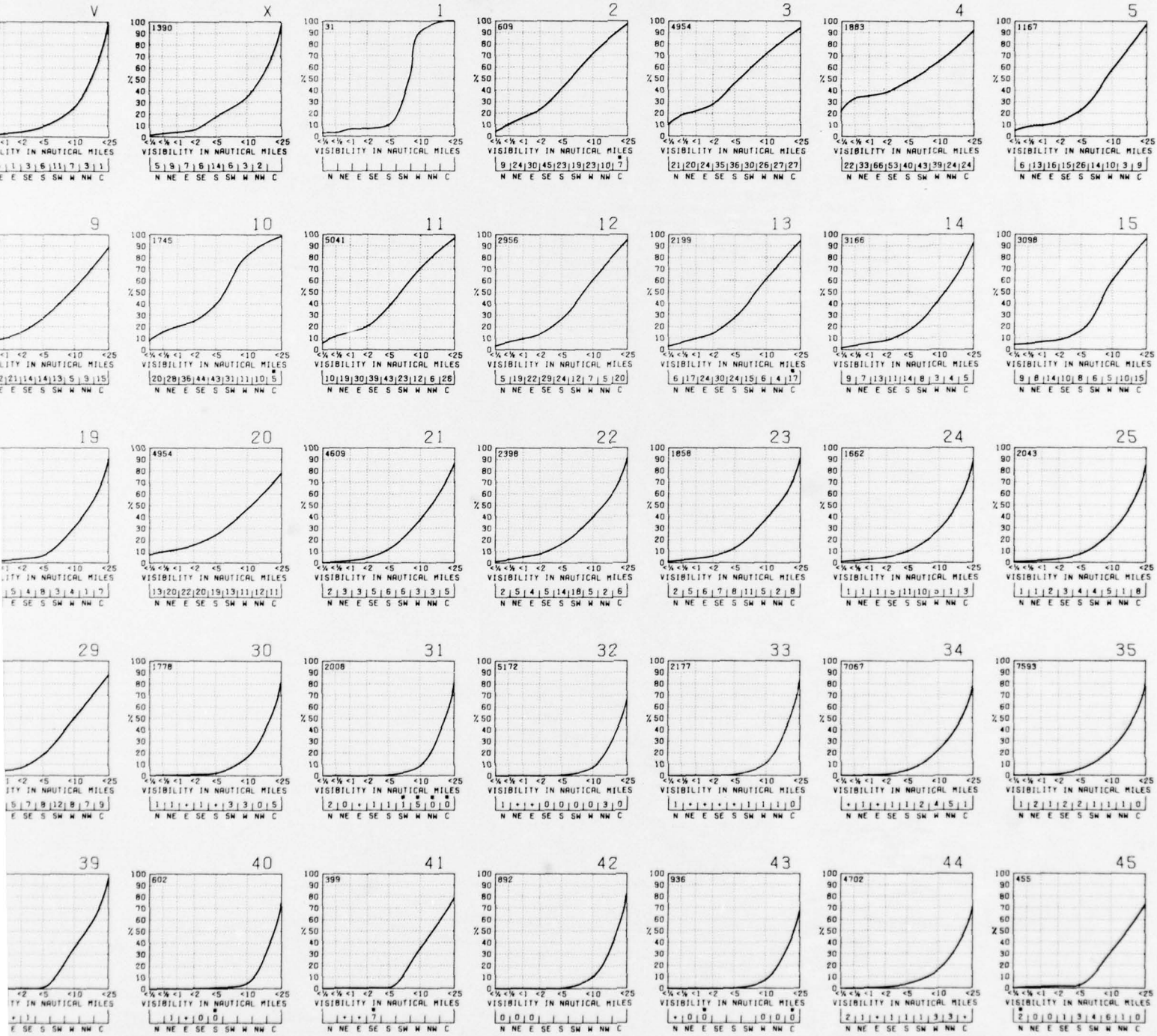






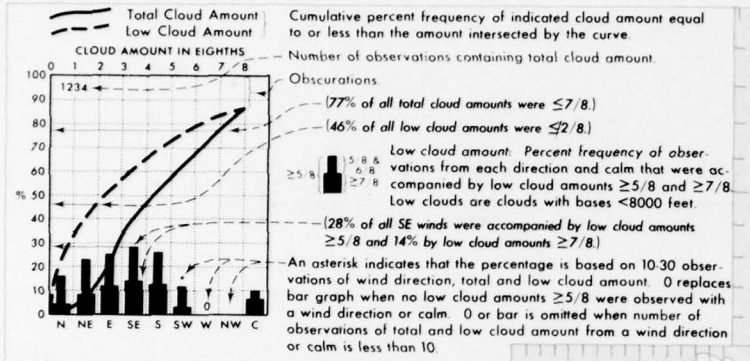
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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

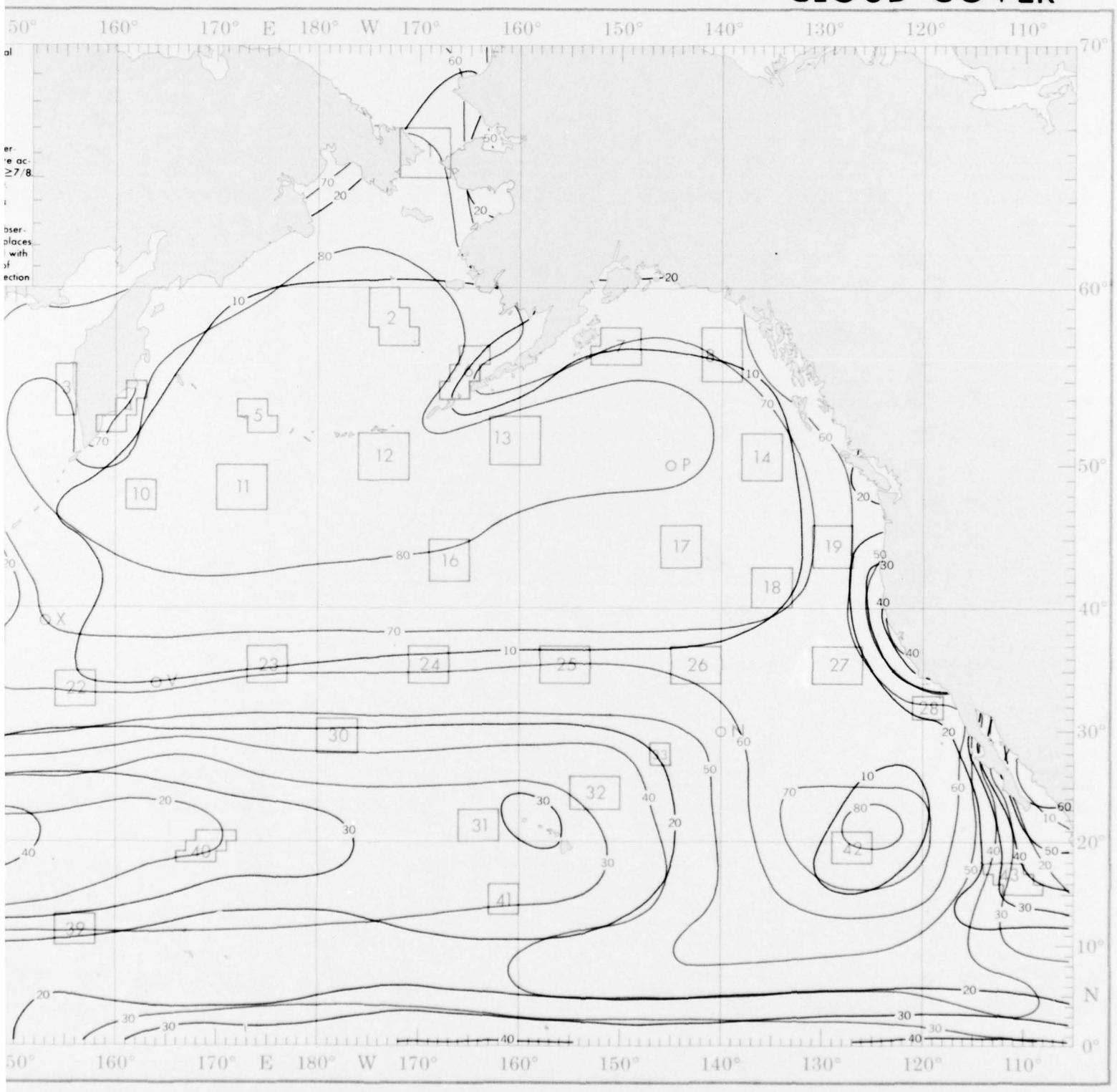
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

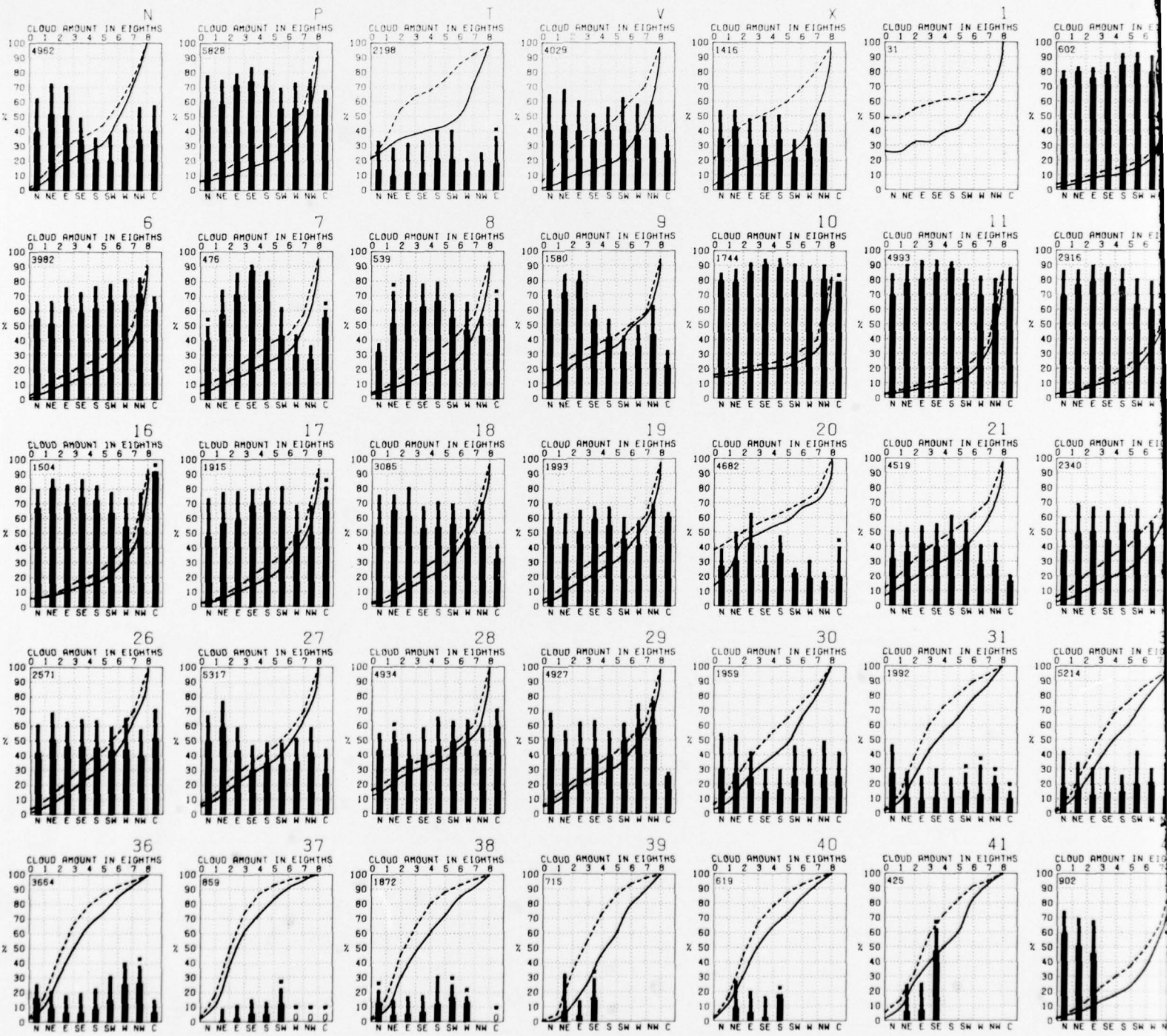
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

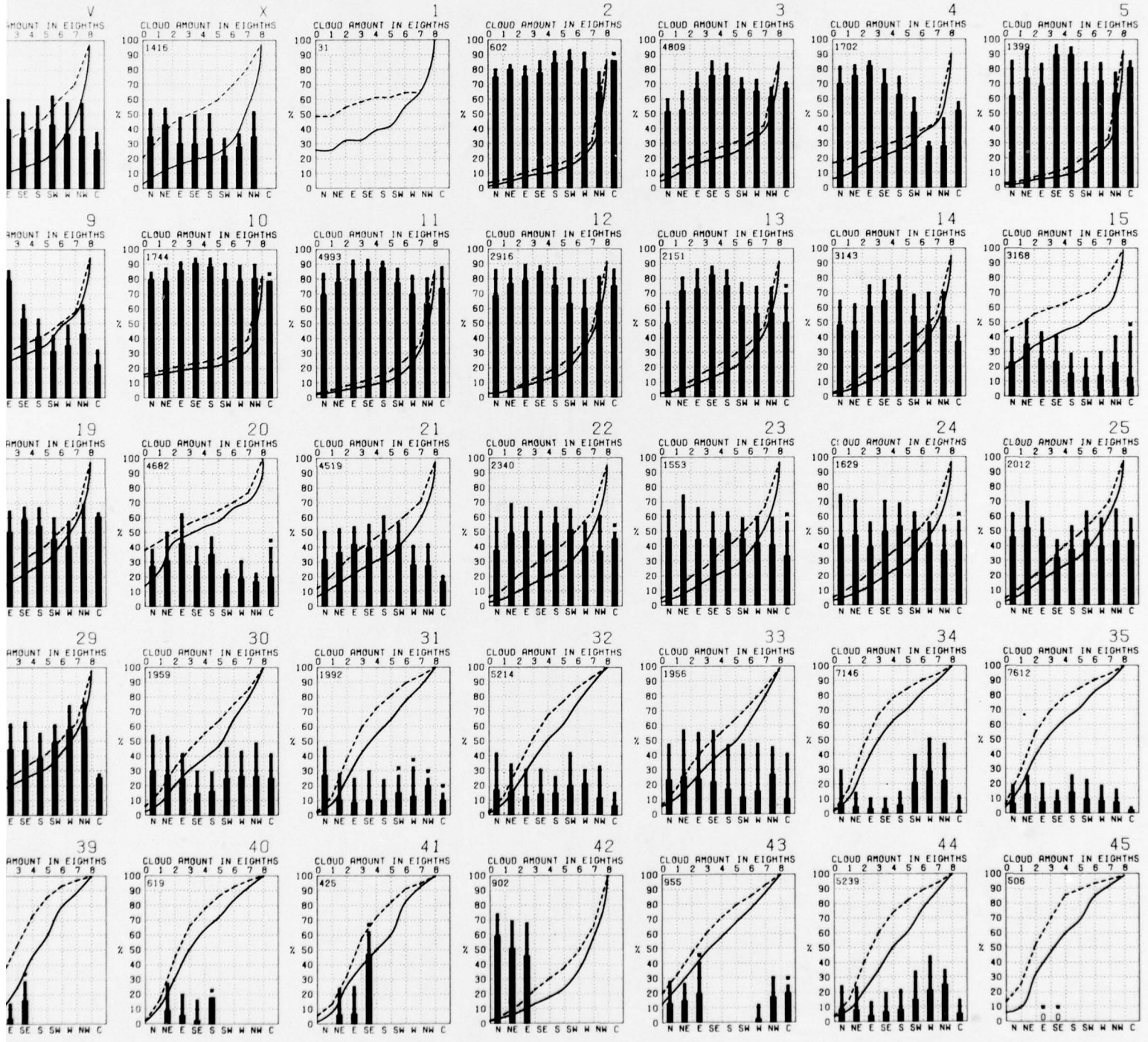

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
2
3
5
10
11
12
13
14
16
17
18
19
22
23
24
25
26
27
28
30
31
32
39
40
41
42
43
OP
OX
OV
ON

CLOUD COVER



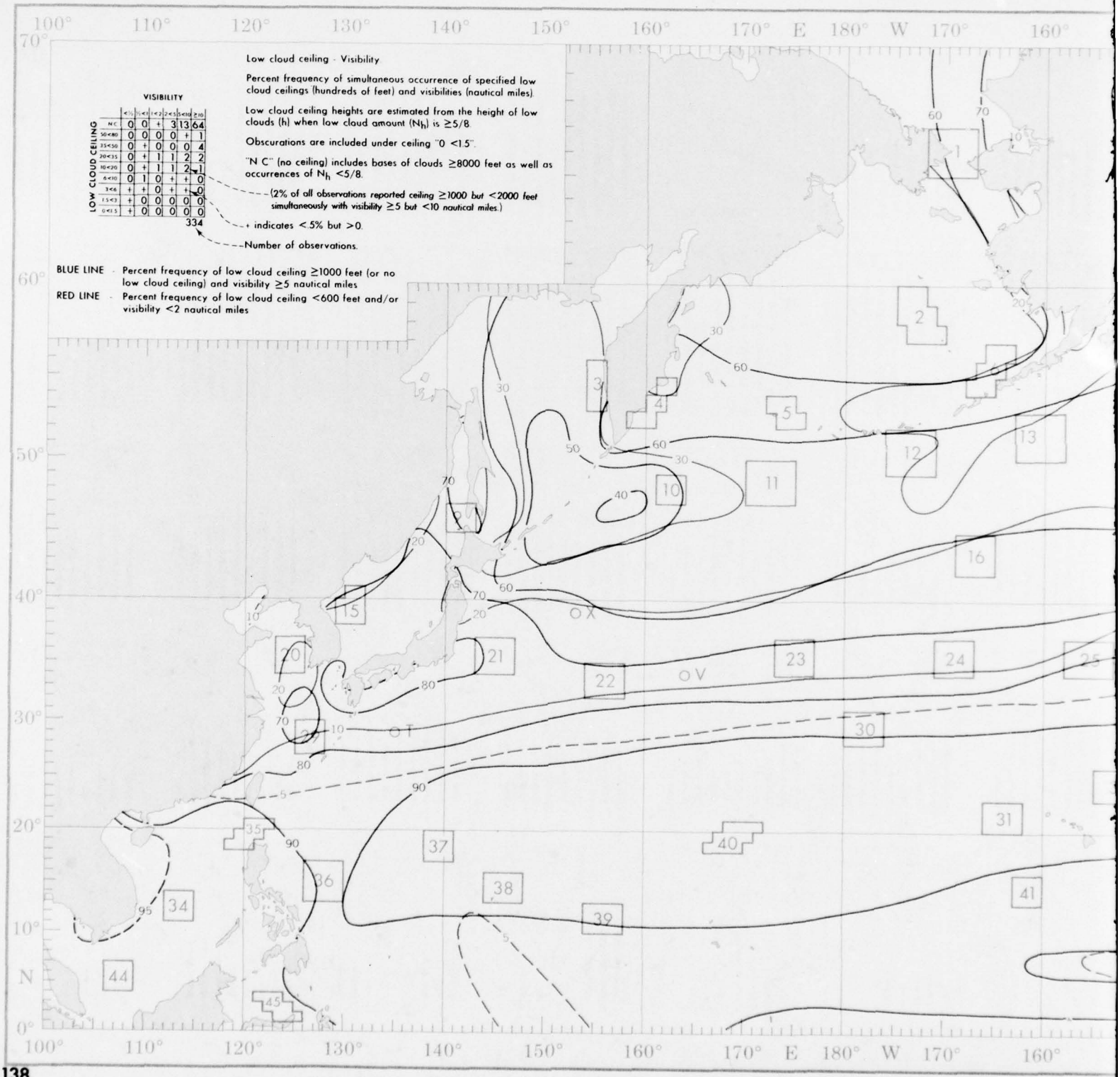
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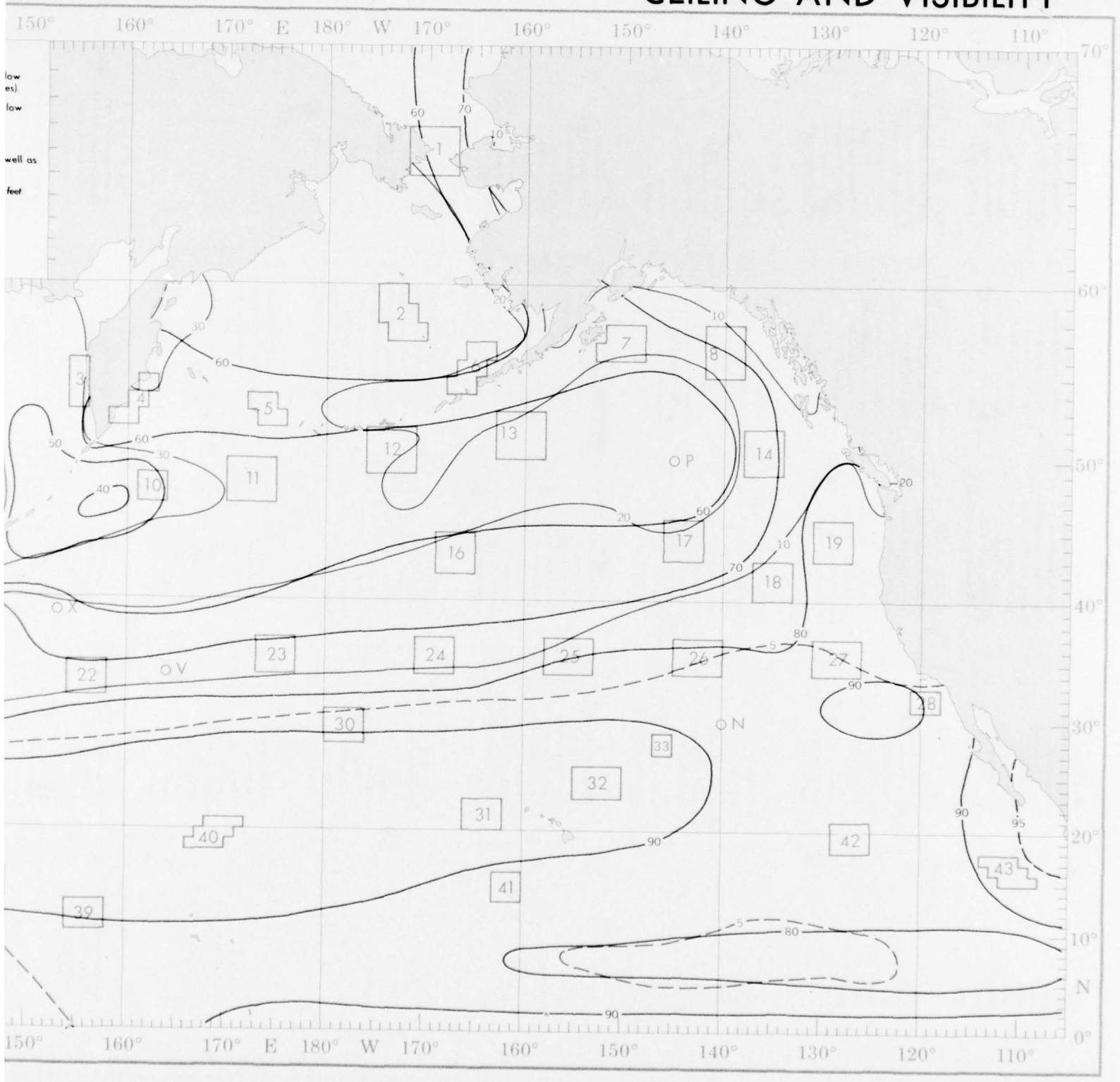
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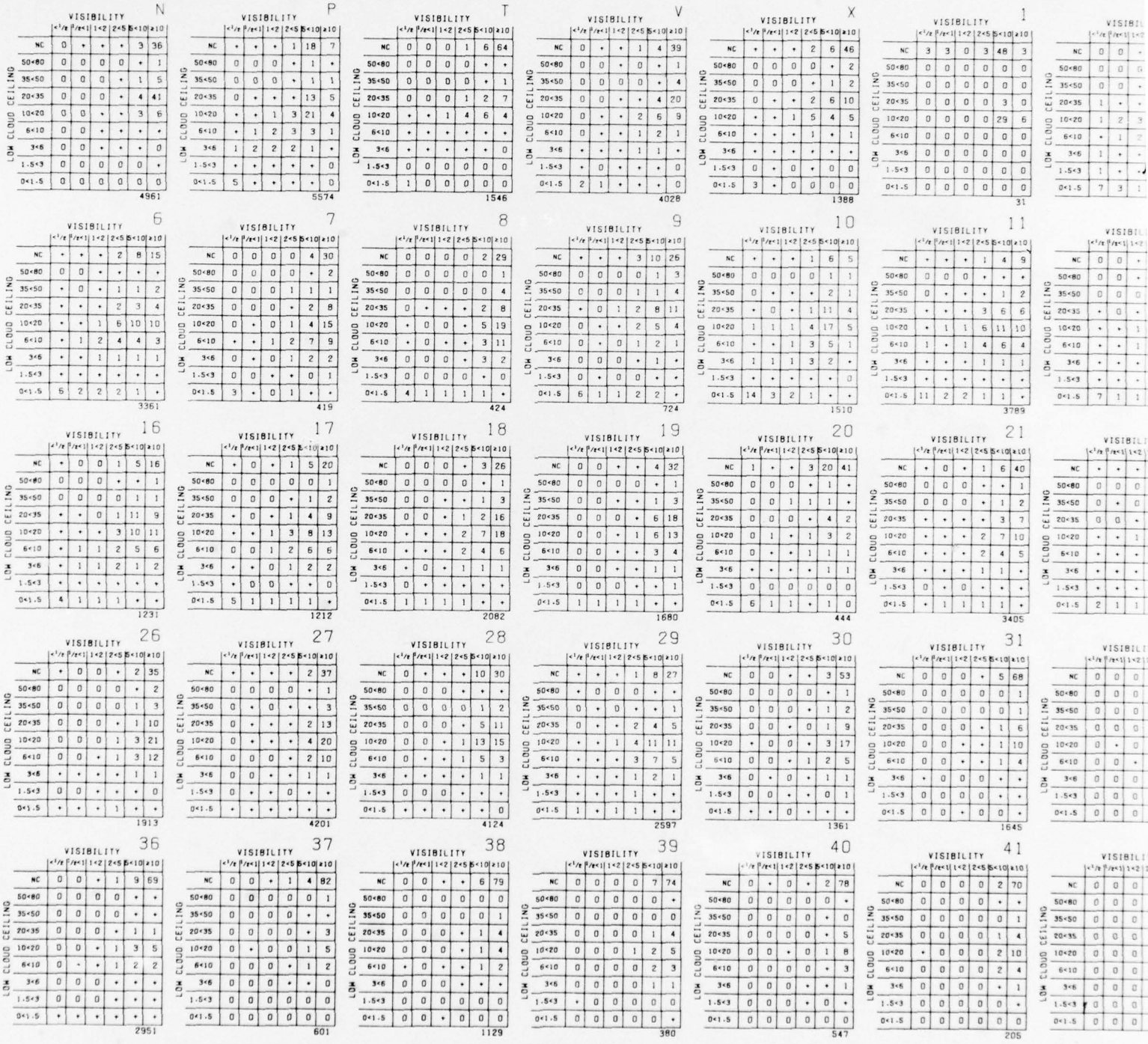
LOW CLOUD CEILING \ VISIBILITY	<½	½<1	1<2	2<5	5<10	≥10
N C	0	0	+	3	13	64
50<80	0	0	0	0	+	1
35<50	0	+	0	0	0	4
20<35	0	+	1	1	2	2
10<20	0	+	1	1	2	1
6<10	0	1	0	+	+	0
3<6	+	+	0	+	+	0
1.5<3	+	0	0	0	0	0
0<1.5	+	0	0	0	0	0

334

CEILING AND VISIBILITY

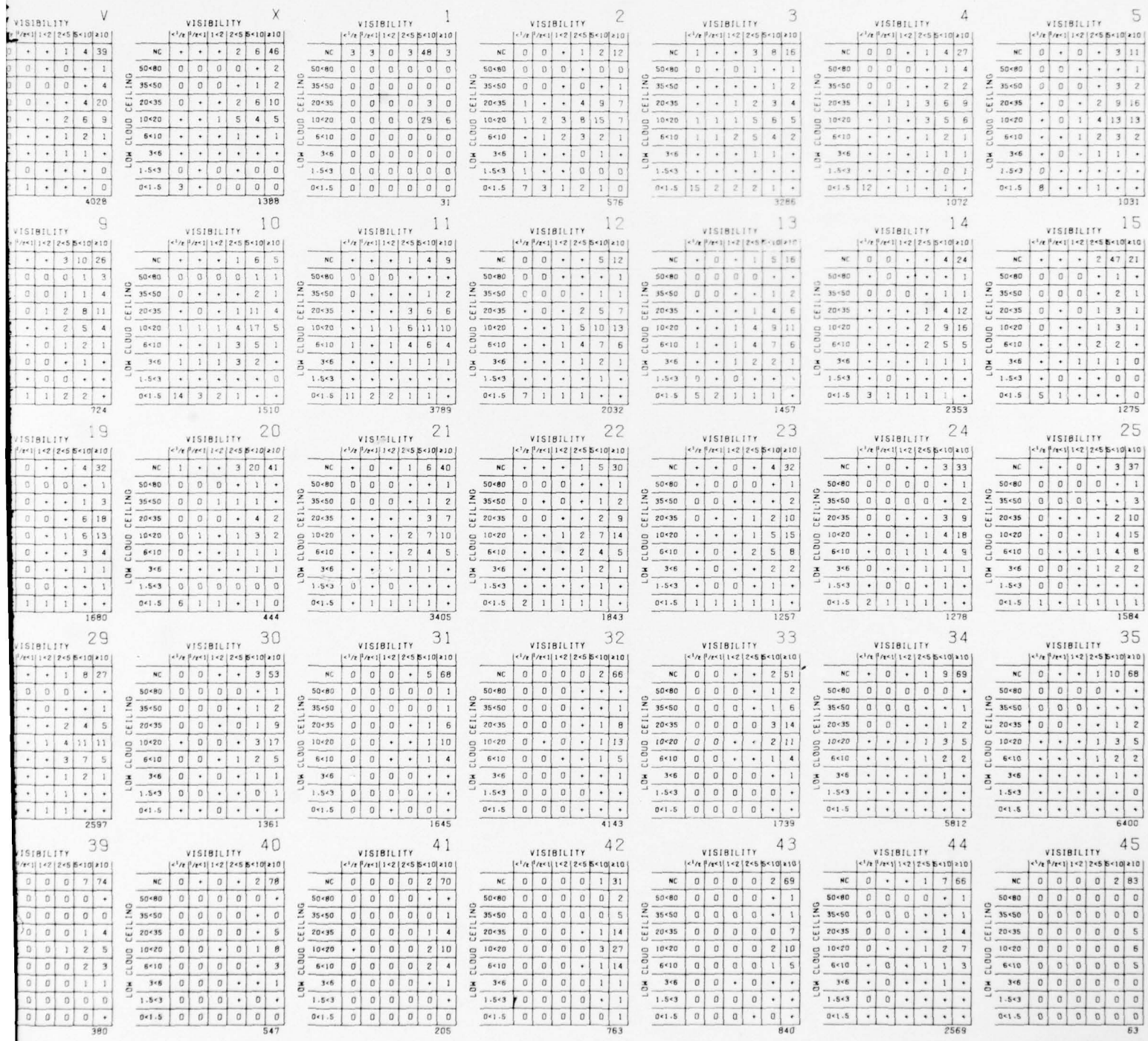


CEILING AND VISIBILITY



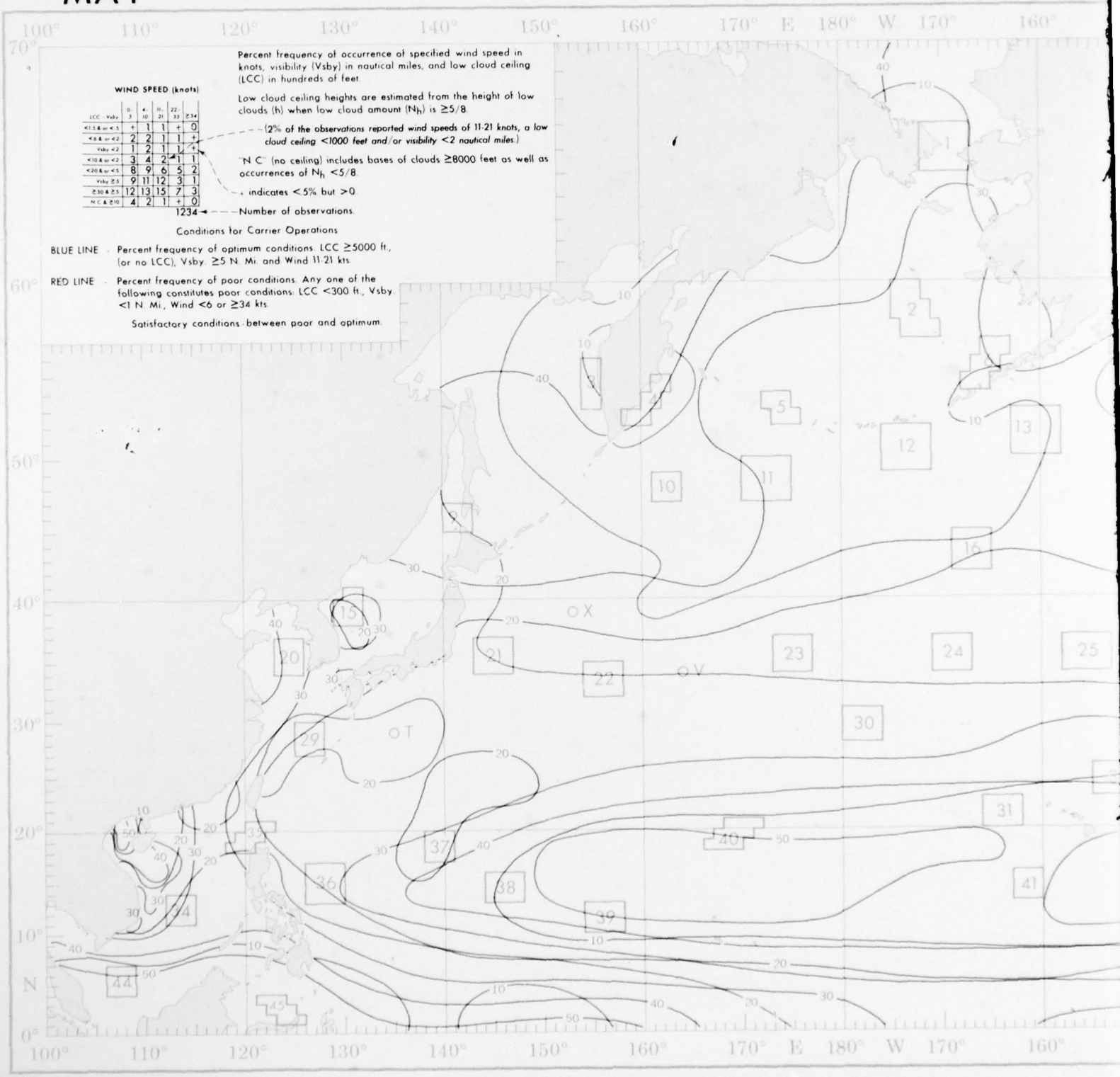
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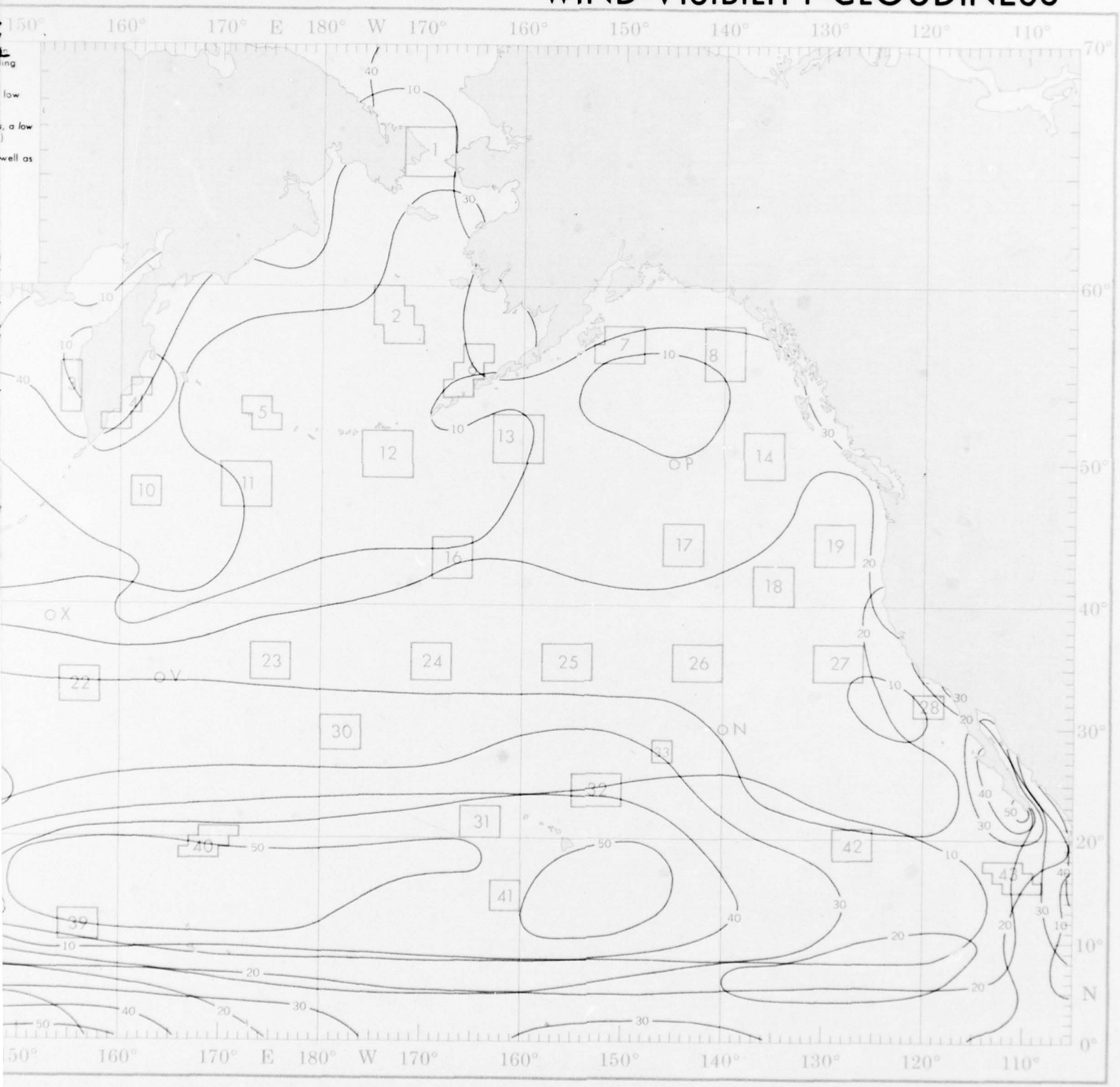


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WIND SPEED (knots)
LCC - Vsby
0-3
4-10
11-21
22-33
≥34
<1.5 & or <5
2
2
1
1
+
<5 & or <2
1
2
1
1
+
Vsby <2
3
4
2
1
1
<10 & or <2
8
9
6
5
2
<20 & or <5
9
11
12
3
1
Vsby ≥5
12
13
15
7
3
≥30 & ≥5
4
2
1
+
0
N C & ≥10
1234
Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
+ indicates <5% but >0.
Number of observations.
Conditions for Carrier Operations
BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.
RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.
Satisfactory conditions between poor and optimum.
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
OX
OV
OT

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	1	3	4	1	+
VSBY ≥5	8	41	47	3	+
≥50 & ≥5	3	18	17	1	+
NC & ≥10	3	16	15	1	+

4959

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	1	+
<6 & OR <2	1	3	8	6	1
VSBY <2	1	3	6	4	+
<10 & OR <2	1	4	10	8	1
<20 & OR <5	2	9	24	17	3
VSBY ≥5	3	16	35	19	3
≥50 & ≥5	1	6	12	6	1
NC & ≥10	1	2	3	2	+

5567

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	+	+	2	+	0
VSBY <2	+	+	1	+	0
<10 & OR <2	+	+	2	+	0
<20 & OR <5	+	2	11	6	1
VSBY ≥5	5	24	46	17	+
≥50 & ≥5	4	22	35	10	+
NC & ≥10	4	21	32	8	0

1545

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	2	3	1	+
VSBY <2	+	2	2	1	+
<10 & OR <2	+	3	5	2	+
<20 & OR <5	1	7	15	6	1
VSBY ≥5	6	29	46	10	1
≥50 & ≥5	4	16	21	3	+
NC & ≥10	4	15	18	2	+

4022

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	+	0
<6 & OR <2	+	2	4	1	+
VSBY <2	+	1	4	1	+
<10 & OR <2	+	2	5	2	+
<20 & OR <5	1	4	13	9	2
VSBY ≥5	3	17	44	17	1
≥50 & ≥5	2	12	30	10	+
NC & ≥10	2	11	25	7	+

1385

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	0	0
<6 & OR <2	0	0	7	0	0
VSBY <2	0	0	7	0	0
<10 & OR <2	0	0	7	0	0
<20 & OR <5	3	0	40	3	0
VSBY ≥5	10	27	50	3	0
≥50 & ≥5	7	23	20	0	0
NC & ≥10	0	0	3	0	0

30

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	5	3	1
<6 & OR <2	1	7	8	5	1
VSBY <2	1	6	6	4	1
<10 & OR <2	2	10	14	8	1
<20 & OR <5	3	21	28	13	2
VSBY ≥5	3	22	29	8	1
≥50 & ≥5	2	10	10	2	+
NC & ≥10	1	7	6	1	+

3316

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	+
<6 & OR <2	1	4	6	2	+
VSBY <2	+	2	3	1	+
<10 & OR <2	3	9	13	6	1
<20 & OR <5	4	16	22	10	1
VSBY ≥5	7	28	38	13	1
≥50 & ≥5	2	11	16	6	+
NC & ≥10	2	9	14	5	+

411

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	3	1	+
<6 & OR <2	1	6	7	2	+
VSBY <2	+	4	2	+	0
<10 & OR <2	3	10	13	4	+
<20 & OR <5	5	21	23	6	+
VSBY ≥5	10	36	36	8	1
≥50 & ≥5	4	14	11	2	0
NC & ≥10	4	13	10	1	0

424

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	4	2	+
<6 & OR <2	1	4	6	2	+
VSBY <2	+	3	4	1	0
<10 & OR <2	1	5	7	3	+
<20 & OR <5	3	9	15	6	1
VSBY ≥5	8	26	37	9	1
≥50 & ≥5	6	15	18	4	+
NC & ≥10	5	9	12	2	0

563

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	7	10	4	+
<6 & OR <2	1	9	14	7	1
VSBY <2	1	7	11	5	1
<10 & OR <2	2	11	19	8	2
<20 & OR <5	2	18	33	14	2
VSBY ≥5	3	17	32	9	1
≥50 & ≥5	1	3	6	2	+
NC & ≥10	+	2	2	+	0

1506

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	6	8	4	1
<6 & OR <2	1	7	11	6	2
VSBY <2	1	6	9	4	2
<10 & OR <2	1	10	17	9	3
<20 & OR <5	2	17	33	15	5
VSBY ≥5	2	16	31	11	2
≥50 & ≥5	+	4	7	2	+
NC & ≥10	+	3	4	1	+

3077

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	5	2	+
<6 & OR <2	1	4	9	4	1
VSBY <2	1	3	5	2	+
<10 & OR <2	1	7	16	7	1
<20 & OR <5	2	13	27	13	2
VSBY ≥5	2	22	38	15	1
≥50 & ≥5	+	7	11	4	+
NC & ≥10	+	5	8	2	+

1224

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	5	1	+
<6 & OR <2	1	6	9	2	+
VSBY <2	1	4	5	1	0
<10 & OR <2	2	10	16	5	1
<20 & OR <5	3	17	30	8	1
VSBY ≥5	3	25	41	11	1
≥50 & ≥5	1	9	12	4	+
NC & ≥10	1	7	9	3	+

1208

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	2	4	1	1
VSBY <2	+	1	1	1	+
<10 & OR <2	1	6	9	3	1
<20 & OR <5	2	15	23	6	2
VSBY ≥5	6	32	42	9	1
≥50 & ≥5	3	13	12	2	+
NC & ≥10	3	11	10	2	+

2072

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	+	+
<6 & OR <2	+	3	3	1	+
VSBY <2	+	1	1	1	0
<10 & OR <2	1	5	7	2	+
<20 & OR <5	2	13	17	3	1
VSBY ≥5	6	38	43	7	1
≥50 & ≥5	3	16	15	3	+
NC & ≥10	2	14	12	3	+

1676

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	4	3	+	0
<6 & OR <2	2	7	5	1	+
VSBY <2	1	5	5	+	+
<10 & OR <2	3	9	6	1	+
<20 & OR <5	3	13	10	3	+
VSBY ≥5	9	37	29	5	+
≥50 & ≥5	7	30	22	3	+
NC & ≥10	5	21	14	1	+

439

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	2	3	3	1
VSBY <2	+	1	1	1	1
<10 & OR <2	+	4	8	6	1
<20 & OR <5	1	8	19	10	2
VSBY ≥5	4	27	44	13	2
≥50 & ≥5	3	18	22	4	+
NC & ≥10	3	16	19	3	+

3385

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	+	+
<6 & OR <2	+	2	2	1	+
VSBY <2	0	+	1	+	0
<10 & OR <2	1	8	9	2	+
<20 & OR <5	3	17	20	5	1
VSBY ≥5	7	41	42	7	1
≥50 & ≥5	3	17	16	2	+
NC & ≥10	3	16	14	2	+

1905

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	+	0
<6 & OR <2	+	2	2	1	+
VSBY <2	+	1	+	+	0
<10 & OR <2	1	5	8	3	+
<20 & OR <5	1	11	21	6	+
VSBY ≥5	4	29	50	13	1
≥50 & ≥5	2	14	20	4	+
NC & ≥10	2	13	18	4	+

4189

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	2	1	+	0
VSBY <2	+	1	+	0	0
<10 & OR <2	1	5	5	1	+
<20 & OR <5	3	17	19	2	+
VSBY ≥5	6	35	48	8	+
≥50 & ≥5	2	12	22	5	+
NC & ≥10	1	8	17	4	+

4111

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	+
<6 & OR <2	+	4	6	1	+
VSBY <2	+	2	3	+	+
<10 & OR <2	1	9	13	3	+
<20 & OR <5	2	18	28	5	+
VSBY ≥5	4	31	42	6	+
≥50 & ≥5	2	15	17	2	+
NC & ≥10	2	12	12	2	+

2576

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	+	1	2	+	0
VSBY <2	+	+	+	+	0
<10 & OR <2	1	4	6	1	0
<20 & OR <5	1	11	16	2	+
VSBY ≥5	9	41	43	5	+
≥50 & ≥5	7	26	22	2	+
NC & ≥10	6	25	20	2	+

1358

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	1	4	1	+
<20 & OR <5	+	4	11	1	+
VSBY ≥5	3	31	60	5	+
≥50 & ≥5	3	24	44	3	0
NC & ≥10	2	23	41	2	0

1644

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	1	+	+
<10 & OR <2	+	3	4	1	+
<20 & OR <5	1	8	9	2	+
VSBY ≥5	6	57	30	2	+
≥50 & ≥5	5	50	23	1	+
NC & ≥10	5	45	16	+	+

2943

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	0	1	2	+	0
<20 & OR <5	1	5	5	+	0
VSBY ≥5	8	47	42	1	0
≥50 & ≥5	7	42	36	1	0
NC & ≥10	7	39	34	1	0

599

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	0	1	3	+	0
<20 & OR <5	0	3	6	1	0
VSBY ≥5	3	37	56	3	0
≥50 & ≥5	3	32	48	2	0
NC & ≥10	3	30	45	2	0

1123

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	0	0	0	0
<6 & OR <2	1	+	1	0	0
VSBY <2	+	0	0	0	0
<10 & OR <2	1	1	4	0	0
<20 & OR <5	1	3	10	1	0
VSBY ≥5	1	17	77	5	0
≥50 & ≥5	+	13	64	4	0
NC & ≥10	+	12	58	4	0

380

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	1	4	1	0
<20 & OR <5	+	3	10	2	0
VSBY ≥5	3	30	61	5	0
≥50 & ≥5	2	26	49	3	0
NC & ≥10	2	25	47	3	0

546

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	1	1	0
VSBY <2	0	1	0	0	0
<10 & OR <2	0	3	5	2	0
<20 & OR <5	0	4	13	4	0
VSBY ≥5	2	18	64	15	0
≥50 & ≥5	2	14	47	11	0
NC & ≥10	2	14	44	11	0

197

Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

ILITY-WIND

MAY

V

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	*	1	1	*	0
	*	2	3	1	*
	*	2	2	1	*
	*	3	5	2	*
	1	7	15	6	*
	6	29	46	10	1
	4	16	21	3	*
	4	15	18	2	*

4022

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	1	2	*	0
<6 & OR <2	*	2	4	1	*
VSBY <2	*	1	4	1	*
<10 & OR <2	*	2	5	2	*
<20 & OR <5	1	4	13	9	2
VSBY ≥5	3	17	44	17	1
≥50 & ≥5	2	12	30	10	*
NC & ≥10	2	11	25	7	*

1385

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	0	0
<6 & OR <2	0	0	7	0	0
VSBY <2	0	0	7	0	0
<10 & OR <2	0	0	7	0	0
<20 & OR <5	3	0	40	3	0
VSBY ≥5	10	27	50	3	0
≥50 & ≥5	7	23	20	0	0
NC & ≥10	0	0	3	0	0

30

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	6	4	1
<6 & OR <2	1	7	10	7	2
VSBY <2	1	6	9	5	1
<10 & OR <2	2	9	13	8	2
<20 & OR <5	3	19	32	13	2
VSBY ≥5	4	23	27	5	1
≥50 & ≥5	1	5	7	1	0
NC & ≥10	1	4	6	1	0

552

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	9	9	3	*
<6 & OR <2	4	11	12	4	1
VSBY <2	3	9	10	4	1
<10 & OR <2	5	14	17	6	1
<20 & OR <5	8	21	25	9	1
VSBY ≥5	8	20	19	5	*
≥50 & ≥5	4	10	9	3	*
NC & ≥10	3	7	6	1	0

3066

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	5	5	5	1	*
<6 & OR <2	7	7	8	2	*
VSBY <2	5	5	7	1	*
<10 & OR <2	7	8	9	2	*
<20 & OR <5	10	13	16	3	*
VSBY ≥5	16	27	23	5	1
≥50 & ≥5	9	15	12	2	*
NC & ≥10	8	11	8	2	*

908

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	3	1	1
<6 & OR <2	1	6	6	3	1
VSBY <2	1	5	4	2	*
<10 & OR <2	1	8	9	4	1
<20 & OR <5	5	22	19	7	2
VSBY ≥5	6	31	31	7	2
≥50 & ≥5	1	5	6	2	*
NC & ≥10	1	5	4	1	*

977

9

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	1	3	4	2	*
	1	4	6	2	*
	*	3	4	1	0
	1	5	7	3	*
	3	9	15	6	1
	8	26	37	9	1
	6	15	18	4	*
	5	9	12	2	0

563

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	7	10	4	*
<6 & OR <2	1	9	14	7	1
VSBY <2	1	7	11	5	1
<10 & OR <2	2	11	19	8	2
<20 & OR <5	2	18	33	14	2
VSBY ≥5	3	17	32	9	1
≥50 & ≥5	1	3	6	2	*
NC & ≥10	*	2	2	*	0

1506

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	6	8	4	1
<6 & OR <2	1	7	11	6	2
VSBY <2	1	6	9	4	2
<10 & OR <2	1	10	17	9	3
<20 & OR <5	2	17	33	15	5
VSBY ≥5	2	16	31	11	2
≥50 & ≥5	*	4	7	2	*
NC & ≥10	*	3	4	1	*

3777

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	4	2	1
<6 & OR <2	1	5	7	5	2
VSBY <2	1	3	5	3	1
<10 & OR <2	1	10	14	8	3
<20 & OR <5	3	18	29	14	4
VSBY ≥5	3	21	34	13	2
≥50 & ≥5	1	5	8	3	1
NC & ≥10	1	3	6	2	*

1895

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	5	3	*
<6 & OR <2	1	5	9	6	1
VSBY <2	1	3	5	4	1
<10 & OR <2	1	10	16	11	2
<20 & OR <5	2	16	29	16	3
VSBY ≥5	3	23	33	12	1
≥50 & ≥5	1	8	10	2	*
NC & ≥10	1	6	7	2	0

1447

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	2	3	1	*
<6 & OR <2	*	5	5	2	*
VSBY <2	*	2	3	1	*
<10 & OR <2	1	9	11	4	*
<20 & OR <5	2	18	24	9	1
VSBY ≥5	4	32	39	11	1
≥50 & ≥5	2	12	13	2	*
NC & ≥10	2	10	11	2	*

2334

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	3	*	0
<6 & OR <2	1	5	5	1	0
VSBY <2	1	4	4	1	0
<10 & OR <2	1	6	7	1	*
<20 & OR <5	1	9	12	2	*
VSBY ≥5	4	26	45	5	*
≥50 & ≥5	3	24	39	3	0
NC & ≥10	1	7	14	*	0

1265

19

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	*	1	2	*	*
	*	3	3	1	*
	*	1	1	1	0
	1	5	7	2	*
	2	13	17	3	1
	6	38	43	7	1
	3	16	15	3	*
	2	14	12	3	*

1676

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	4	3	*	0
<6 & OR <2	2	7	5	1	*
VSBY <2	1	5	5	*	*
<10 & OR <2	3	9	6	1	*
<20 & OR <5	3	13	10	3	*
VSBY ≥5	9	37	25	5	*
≥50 & ≥5	7	30	22	3	*
NC & ≥10	5	21	14	1	*

439

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	1	1	1	*
<6 & OR <2	*	2	3	3	1
VSBY <2	*	1	1	1	1
<10 & OR <2	*	4	8	6	1
<20 & OR <5	1	8	19	10	2
VSBY ≥5	4	27	44	13	2
≥50 & ≥5	3	18	22	4	*
NC & ≥10	3	16	19	3	*

3385

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	2	4	1	*
<6 & OR <2	*	3	8	4	*
VSBY <2	*	2	4	1	*
<10 & OR <2	1	6	14	6	1
<20 & OR <5	2	11	26	11	1
VSBY ≥5	3	22	45	13	2
≥50 & ≥5	1	11	20	4	*
NC & ≥10	1	9	17	3	*

1836

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	2	2	*	*
<6 & OR <2	*	4	6	1	*
VSBY <2	*	1	2	1	*
<10 & OR <2	1	8	13	4	*
<20 & OR <5	2	15	24	7	1
VSBY ≥5	4	34	42	10	1
≥50 & ≥5	2	15	17	2	*
NC & ≥10	2	13	14	2	*

1253

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	2	2	*	0
<6 & OR <2	1	4	5	1	*
VSBY <2	*	2	2	1	*
<10 & OR <2	1	9	12	2	*
<20 & OR <5	2	16	26	5	*
VSBY ≥5	4	34	45	7	*
≥50 & ≥5	2	16	17	2	0
NC & ≥10	2	14	15	2	0

1273

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	2	2	*	0
<6 & OR <2	*	3	6	1	*
VSBY <2	*	1	2	*	*
<10 & OR <2	1	6	12	4	1
<20 & OR <5	2	12	24	6	1
VSBY ≥5	6	34	44	9	1
≥50 & ≥5	3	18	17	2	*
NC & ≥10	3	16	16	2	*

1581

29

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	*	2	2	*	*
	*	4	6	1	*
	*	2	3	*	*
	1	9	13	3	*
	2	18	28	5	*
	4	31	42	6	*
	2	15	17	2	*
	2	12	12	2	*

2576

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	1	*	0
<6 & OR <2	*	1	2	*	0
VSBY <2	*	*	*	*	0
<10 & OR <2	1	4	6	1	0
<20 & OR <5	1	11	16	2	*
VSBY ≥5	9	41	43	5	*
≥50 & ≥5	7	26	22	2	*
NC & ≥10	6	25	20	2	*

1358

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	*	0	0
<6 & OR <2	*	*	1	*	0
VSBY <2	0	*	*	*	0
<10 & OR <2	*	1	4	1	*
<20 & OR <5	*	4	11	1	*
VSBY ≥5	3	31	60	5	*
≥50 & ≥5	3	24	44	3	0
NC & ≥10	2	23	41	2	0

1644

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	*	0	0
<6 & OR <2	*	*	1	*	0
VSBY <2	0	*	*	0	0
<10 & OR <2	*	2	5	1	0
<20 & OR <5	*	5	14	2	0
VSBY ≥5	4	27	63	6	0
≥50 & ≥5	3	20	42	3	0
NC & ≥10	3	19	40	3	0

4125

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	0	*	0
<6 & OR <2	0	*	1	*	0
VSBY <2	0	0	*	0	0
<10 & OR <2	*	2	4	*	*
<20 & OR <5	1	6	12	2	*
VSBY ≥5	6	37	53	3	*
≥50 & ≥5	4	24	27	1	0
NC & ≥10	4	22	24	1	0

1739

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	*	*	*	*
<6 & OR <2	*	1	2	*	*
VSBY <2	*	*	1	*	*
<10 & OR <2	*	3	4	1	*
<20 & OR <5	1	6	9	2	*
VSBY ≥5	12	54	26	3	*
≥50 & ≥5	11	48	18	1	0
NC & ≥10	10	43	15	1	0

5779

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	*	*	*	0
<6 & OR <2	*	1	2	*	*
VSBY <2	0	*	1	*	*
<10 & OR <2	*	2	4	1	*
<20 & OR <5	1	5	8	3	*
VSBY ≥5	11	45	33	6	*
≥50 & ≥5	11	39	26	3	*
NC & ≥10	9	34	22	2	*

6355

39

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	1	0	0	0	0
	*	1	0	0	0
	*	0	0	0	0
	1	1	4	0	0
	1	3	10	1	0
	1	17	77	5	0
	*	13	64	4	0
	*	12	58	4	0

380

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	2	*	0
VSBY <2	0	0	*	0	0
<10 & OR <2	*	1	4	1	0
<20 & OR <5	*	3	10	2	0
VSBY ≥5	3	30	61	5	0
≥50 & ≥5	2	26	49	3	0
NC & ≥10	2	25	47	3	0

546

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	2	1	1	0
VSBY <2	0	1	0	0	0
<10 & OR <2	0	3	5	2	0
<20 & OR <5	0	4	13	4	0
VSBY ≥5	2	18	64	15	0
≥50 & ≥5	2	14	47	11	0
NC & ≥10	2	14	44	11	0

197

42

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	1	3	*	0
VSBY <2	0	0	0	0	0
<10 & OR <2	*	4	12	1	0
<20 & OR <5	1	12	32	3	0
VSBY ≥5	1	30	64	4	0
≥50 & ≥5	*	12	20	1	0
NC & ≥10	*	11	19	1	0

761

43

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	*	*	0	0
<6 & OR <2	*	1	*	0	0
VSBY <2	0	*	0	0	0
<10 & OR <2	1	4	2	*	0
<20 & OR <5	2	11	6	*	0
VSBY ≥5	8	61	30	1	0
≥50 & ≥5	6	45	21	*	0
NC & ≥10	6	43	20	*	0

836

44

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	*	*	*	*	0
<6 & OR <2	*	1	1	*	0
VSBY <2	*	*	*	*	0
<10 & OR <2	1	3	3	*	0
<20 & OR <5	3	10	6	*	0
VSBY ≥5	24	56	15	*	0
≥50 & ≥5	20	44	9	*	0
NC & ≥10	19	39	8	*	0

2527

45

WIND SPEED (KNOTS)

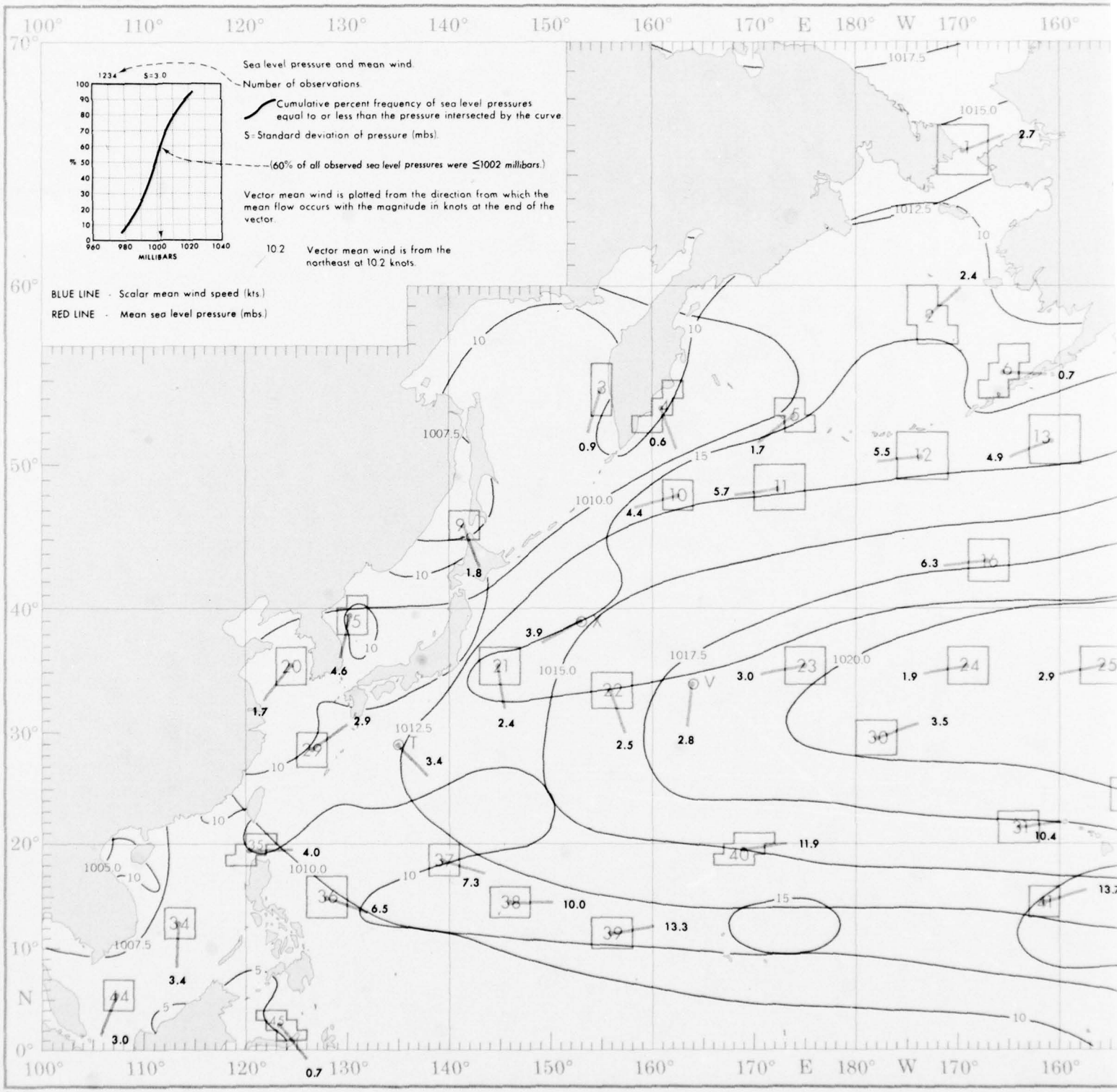
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	2	0	0	0
<20 & OR <5	2	7	2	0	0
VSBY ≥5	28	67	5	0	0
≥50 & ≥5	24	57	3	0	0
NC & ≥10	24	55	3	0	0

58

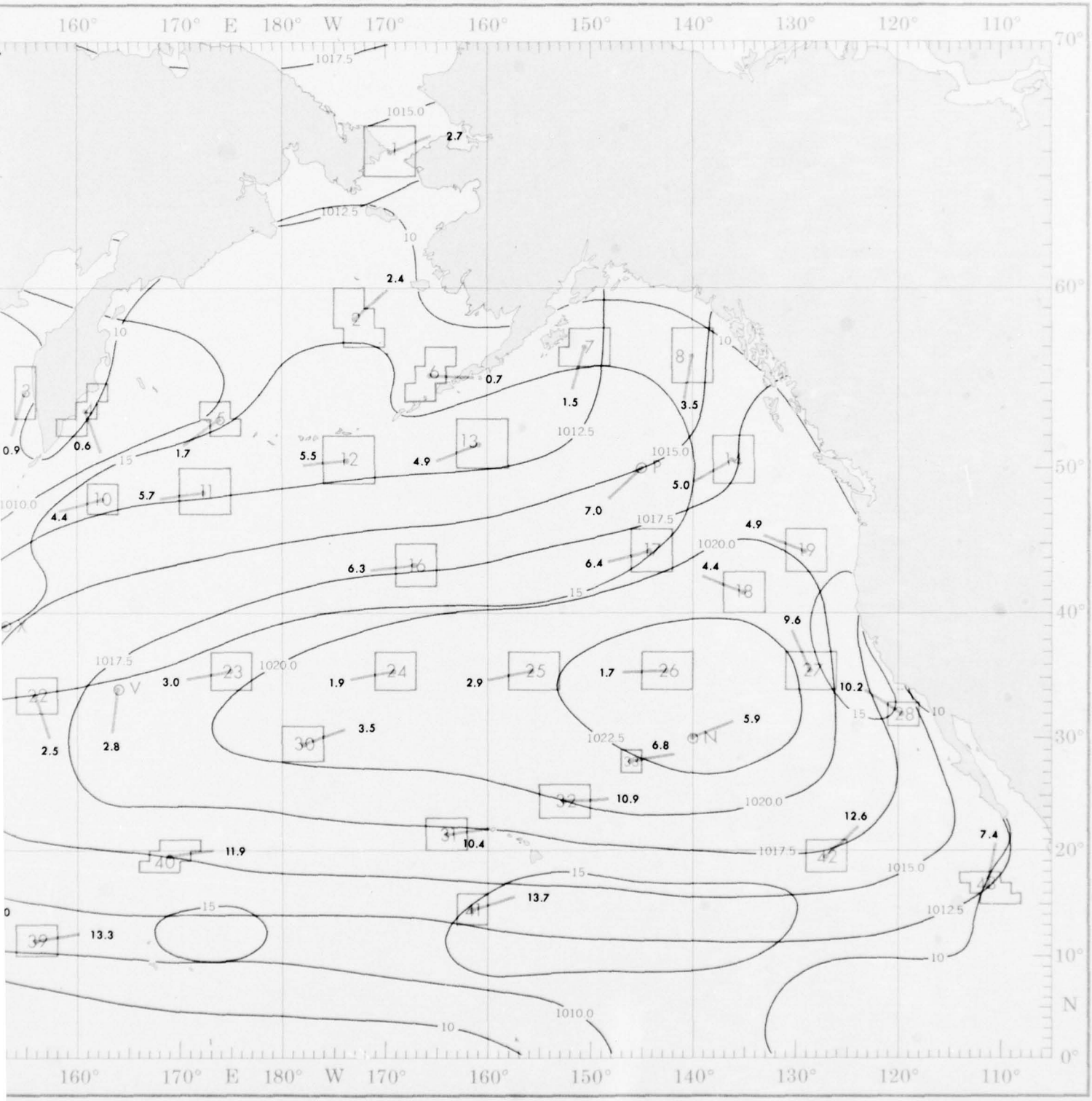
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

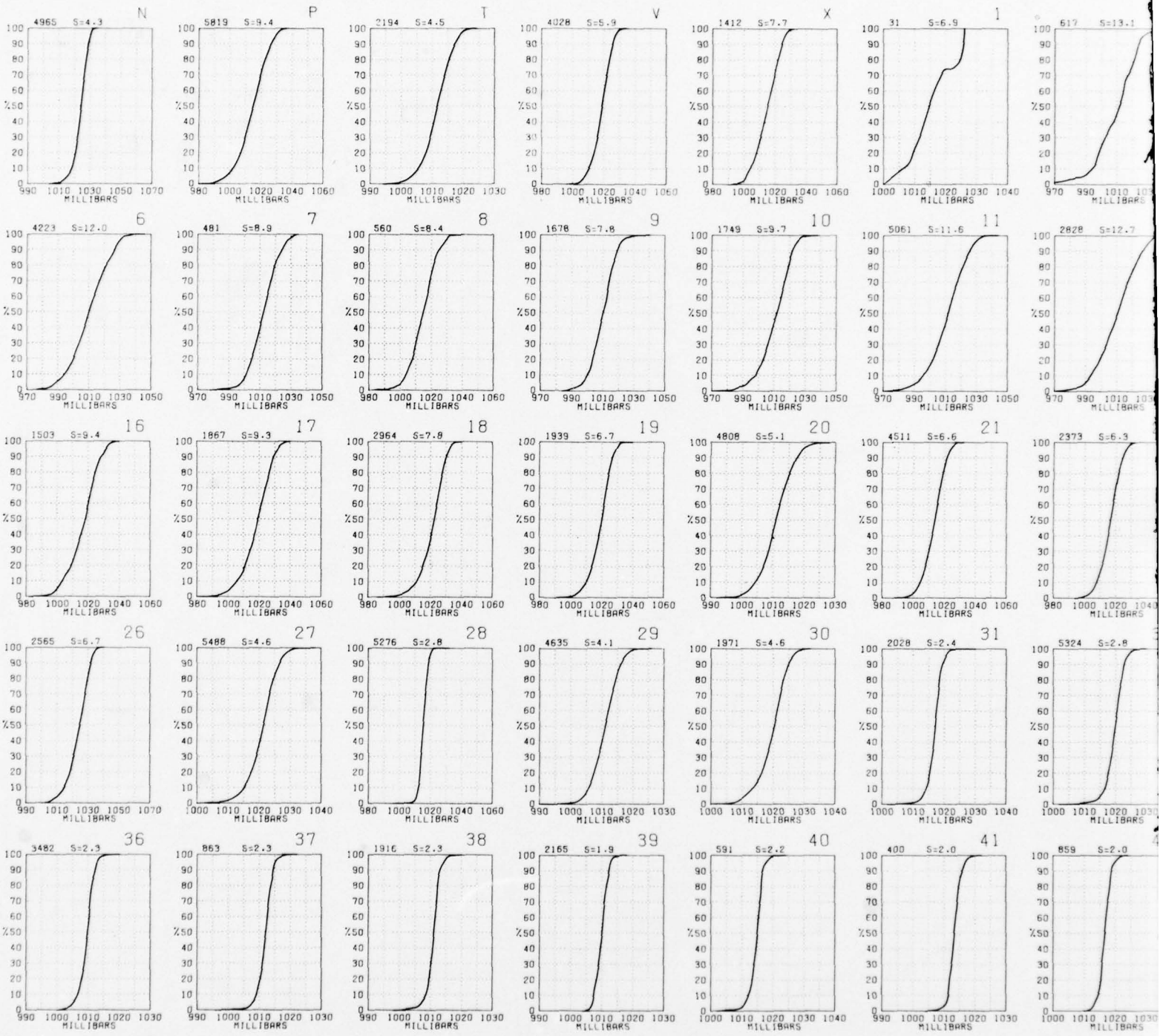
SEA LEVEL P



SEA LEVEL PRESSURE AND MEAN WIND

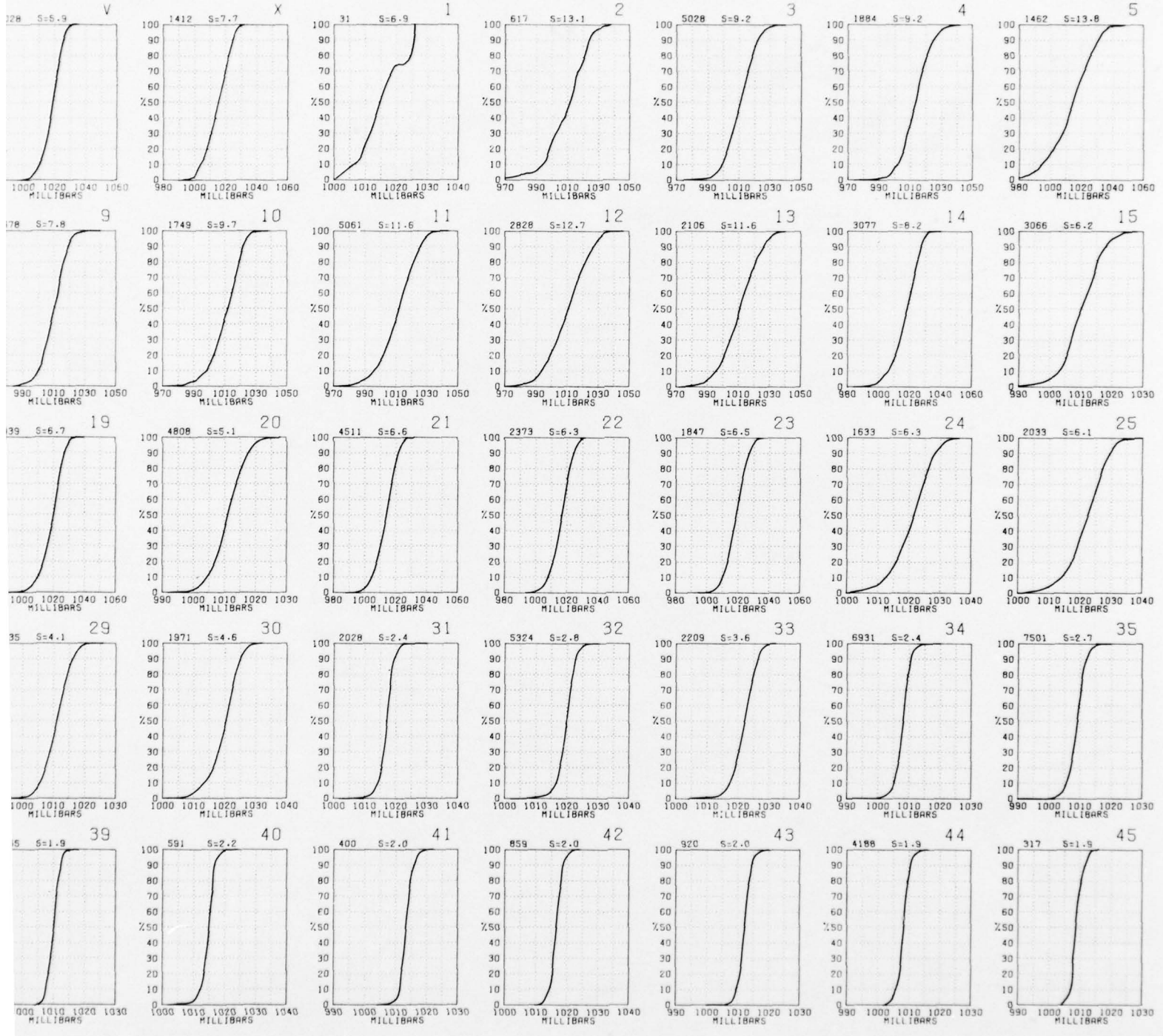


SEA LEVEL PRESSURE



Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

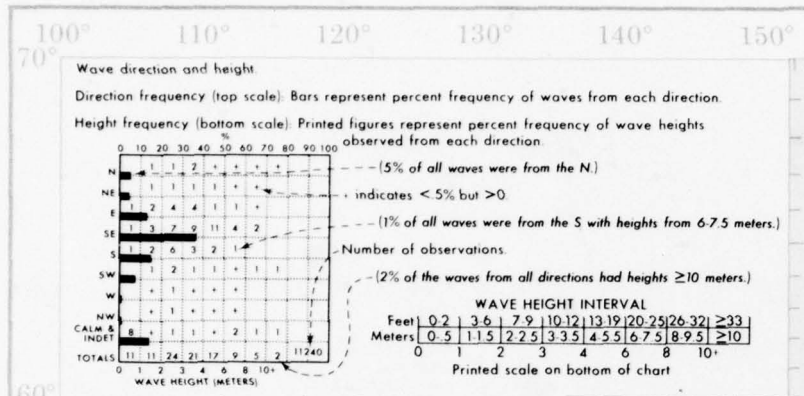
MAY



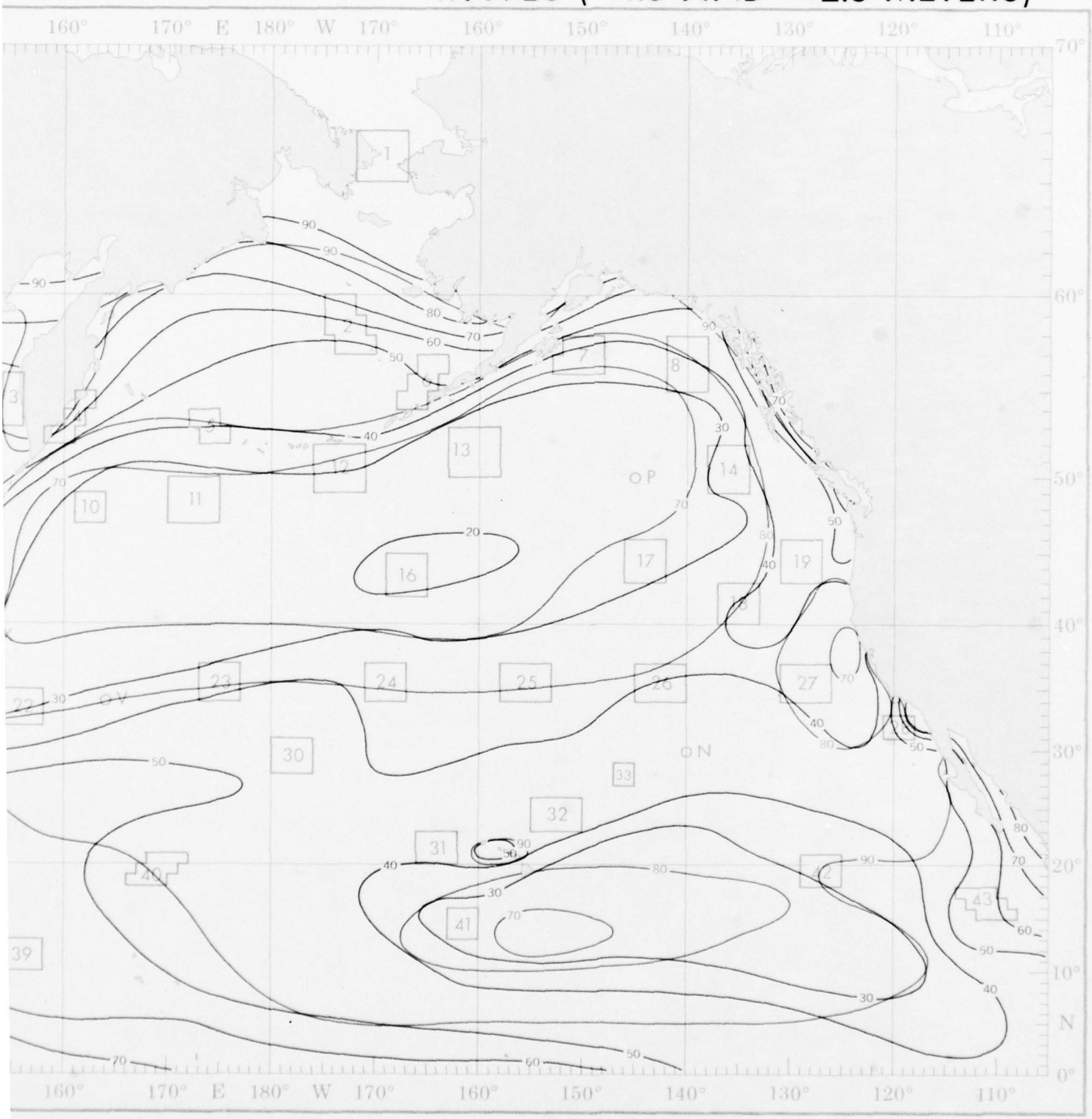
t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

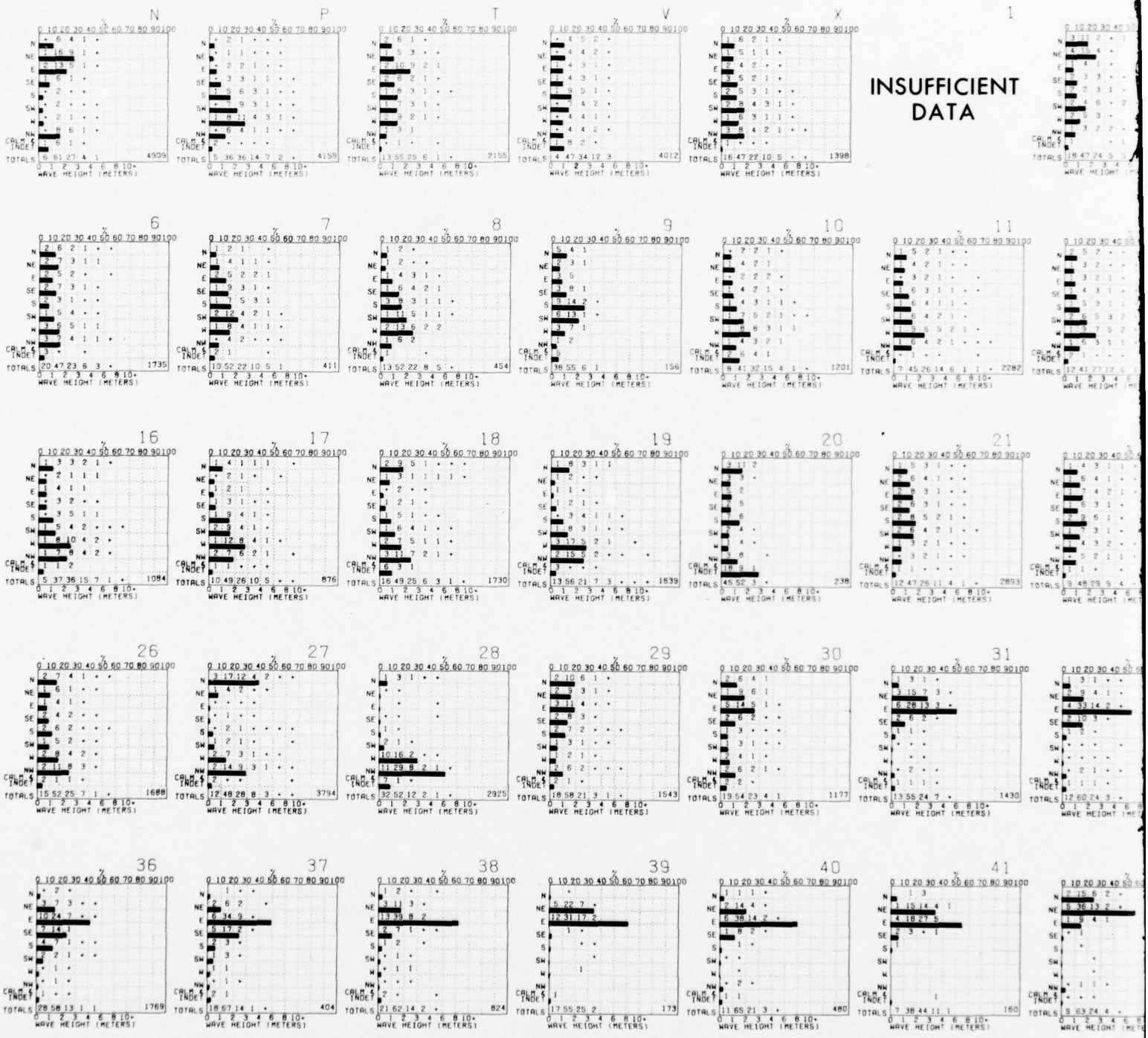
WAVES


Wave direction and height.
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
+ indicates < 5% but >0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 | 3-6 | 7-9 | 10-12 | 13-19 | 20-25 | 26-32 | ≥33
Meters 0-.5 | 1-1.5 | 2-2.5 | 3-3.5 | 4-5.5 | 6-7.5 | 8-9.5 | ≥10
0 1 2 3 4 6 8 10+
Printed scale on bottom of chart
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
N
NE
E
SE
S
SW
W
NW
CALM & INDET
TOTALS
11 11 24 21 17 9 5 2 11240
WAVE HEIGHT (METERS)

WAVES (<1.5 AND <2.5 METERS)

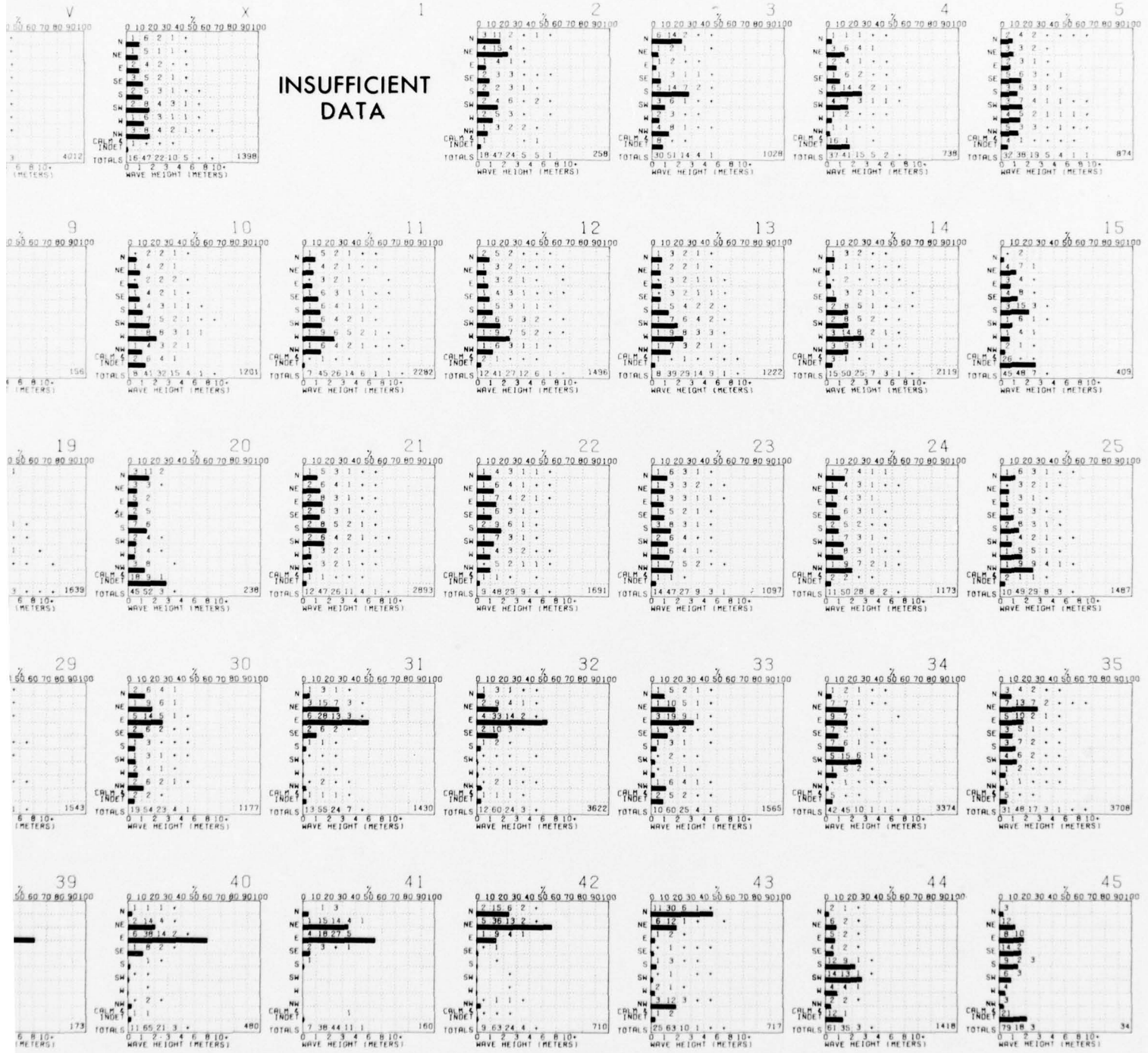


WAVE DIRECTION AND HEIGHT



Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

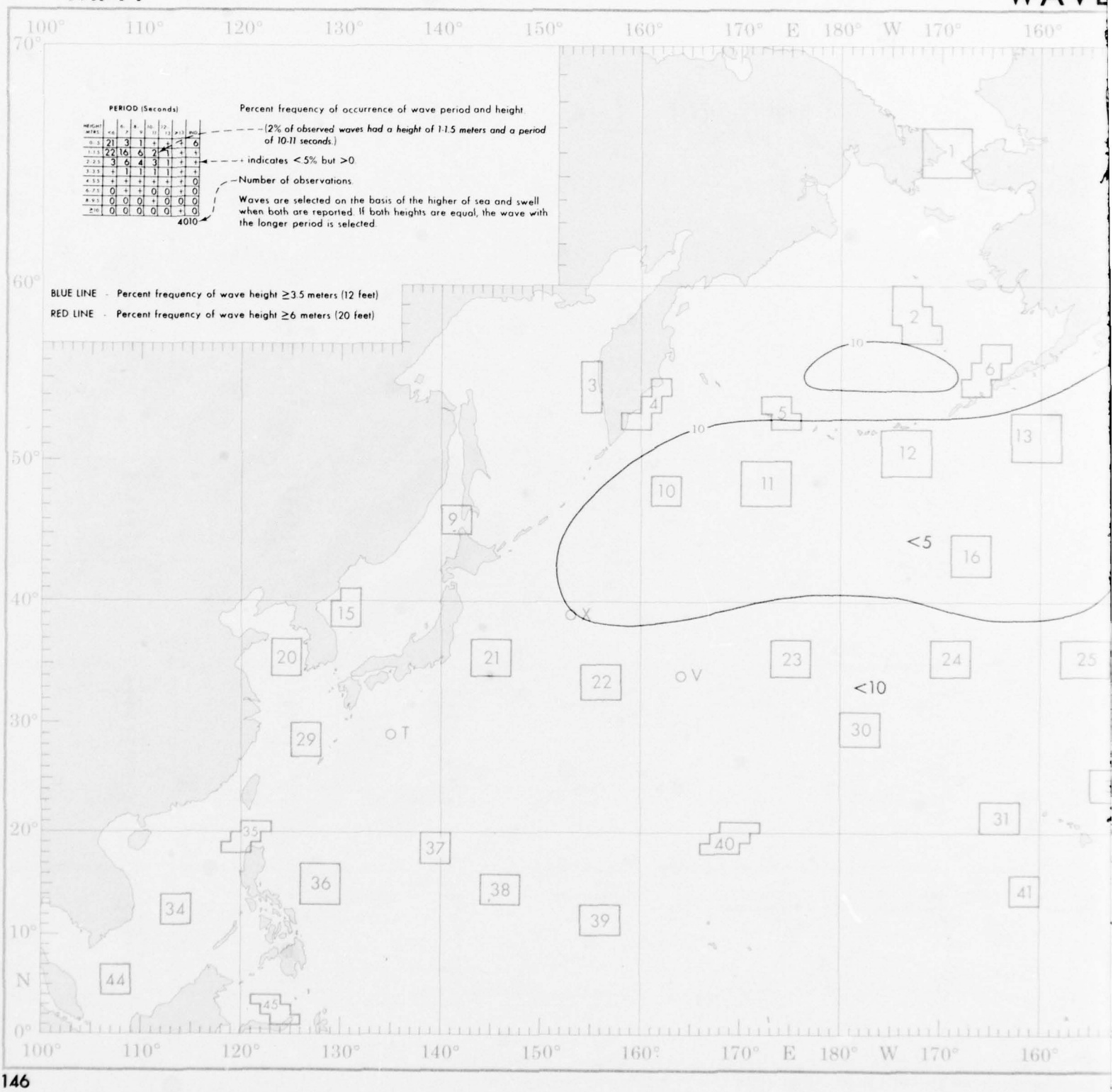
INSUFFICIENT DATA



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

MAY

WAVE


PERIOD (Seconds)
HEIGHT METERS
<6
6-7
8-9
10-11
12-13
≥13
0-1.5
1-1.5
2-2.5
3-3.5
4-5.5
6-7.5
8-9.5
≥10
21 3 1 + + 6
22 16 6 2 + +
3 6 4 3 1 + +
+ 1 1 1 + +
+ + + + + 0
0 + + 0 0 + 0
0 0 0 + 0 0 0
0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° 0° N
10
10
<5
<10
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 35 36 37 38 39 40 41 44 45
X V T

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	1	+	0	0	1
1-1.5	17	20	14	3	1	0	6
2-2.5	4	12	7	3	1	+	1
3-3.5	+	2	1	1	+	+	+
4-5.5	0	+	+	+	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4923

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	+	+	0	0	2
1-1.5	11	15	7	2	1	+	+
2-2.5	2	17	9	5	2	+	+
3-3.5	+	5	6	2	1	+	+
4-5.5	+	2	3	1	1	+	0
6-7.5	0	+	1	+	+	+	+
8-9.5	0	+	+	+	+	+	+
≥10	0	0	0	0	0	0	0

4156

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	5	2	+	0	0	5
1-1.5	4	15	18	2	+	0	17
2-2.5	2	5	11	1	+	0	5
3-3.5	+	2	3	1	0	0	0
4-5.5	0	0	1	+	0	0	+
6-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2171

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	0	+	0	0	1
1-1.5	13	18	5	2	1	+	8
2-2.5	3	17	9	3	+	+	2
3-3.5	+	4	5	2	+	0	+
4-5.5	0	+	2	1	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4024

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	6	6	0	0	0	5
1-1.5	+	10	25	1	+	0	11
2-2.5	0	3	17	1	+	+	2
3-3.5	0	1	9	1	+	0	0
4-5.5	0	+	4	1	+	+	0
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1405

1

INSUFFICIENT DATA

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	+	+	0	0	4
1-1.5	27	13	3	+	+	0	1
2-2.5	4	12	5	1	+	+	+
3-3.5	1	3	1	1	+	+	+
4-5.5	+	1	1	+	+	1	+
6-7.5	0	0	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1816

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	0	+	0	0	4
1-1.5	19	17	7	1	2	0	3
2-2.5	3	9	5	4	+	0	1
3-3.5	1	4	1	1	+	1	+
4-5.5	+	+	2	1	+	+	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

423

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	0	+	0	0	2
1-1.5	23	14	7	2	2	1	+
2-2.5	6	7	5	1	1	1	0
3-3.5	1	2	2	1	1	0	+
4-5.5	+	1	2	1	+	+	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

472

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	0	0	0	0	29
1-1.5	21	4	1	0	0	0	26
2-2.5	2	1	0	1	0	0	2
3-3.5	0	1	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

166

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+	0	0	2
1-1.5	11	14	7	3	1	+	5
2-2.5	4	15	6	2	+	+	4
3-3.5	1	3	4	1	1	+	1
4-5.5	+	+	2	1	+	+	+
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1215

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	13	21	8	1	+	0	1
2-2.5	3	8	10	4	1	+	+
3-3.5	+	4	4	3	1	+	+
4-5.5	+	1	3	1	1	+	+
6-7.5	0	+	+	+	1	+	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	+	0	0

2312

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	11	14	6	3	1	0	2
2-2.5	4	15	9	3	+	+	2
3-3.5	1	5	5	2	1	+	+
4-5.5	+	2	2	1	1	+	0
6-7.5	0	+	+	0	+	+	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

1096

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	1
1-1.5	19	17	5	2	1	+	2
2-2.5	3	9	8	4	1	+	+
3-3.5	1	3	4	1	1	+	+
4-5.5	1	1	1	1	1	+	+
6-7.5	0	0	0	+	+	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

903

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	6
1-1.5	19	14	9	1	1	+	4
2-2.5	3	10	7	3	+	+	1
3-3.5	+	2	2	2	+	+	+
4-5.5	+	1	1	1	+	+	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	+	+	0	0
≥10	0	0	0	0	0	0	0

1756

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	1	+	0	0	4
1-1.5	19	23	10	1	1	+	1
2-2.5	4	7	6	3	+	+	+
3-3.5	+	2	2	2	1	+	0
4-5.5	+	1	1	+	+	+	0
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	+	0	0	0	0

1656

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	+	0	0	0	0	21
1-1.5	22	11	5	0	0	0	11
2-2.5	0	2	0	0	0	0	1
3-3.5	+	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

255

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	1	+	0	0	2
1-1.5	19	16	8	1	1	+	1
2-2.5	4	9	8	2	1	+	1
3-3.5	1	3	3	3	+	+	+
4-5.5	1	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

2945

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	+	+	0	0	3
1-1.5	24	15	5	2	1	+	2
2-2.5	3	8	7	3	1	1	2
3-3.5	1	1	3	1	1	+	+
4-5.5	+	+	+	+	+	+	0
6-7.5	0	+	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1732

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	3
1-1.5	20	17	6	1	1	+	1
2-2.5	4	10	9	3	1	1	1
3-3.5	1	2	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	+	+	0	0	+	0
≥10	0	0	0	0	0	0	0

3863

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	2	1	+	0	0	7
1-1.5	33	12	4	1	+	+	1
2-2.5	3	5	2	1	+	+	+
3-3.5	+	1	1	+	+	0	0
4-5.5	0	+	+	+	+	+	+
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2962

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	+	+	0	0	3
1-1.5	28	22	5	+	+	0	1
2-2.5	3	7	5	2	+	+	2
3-3.5	+	1	1	1	+	+	0
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	+	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1572

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	1	+	0	0	2
1-1.5	25	16	7	1	1	+	2
2-2.5	3	8	6	2	1	1	+
3-3.5	+	1	2	+	+	+	0
4-5.5	0	+	+	+	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1222

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	+	+	0	0	1
1-1.5	28	15	6	2	1	+	1
2-2.5	4	8	8	2	1	+	1
3-3.5	+	2	2	2	+	+	+
4-5.5	+	+	0	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1452

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	3	1	1	0	0	2
1-1.5	25	23	5	2	1	+	+
2-2.5	1	3	5	3	+	+	+
3-3.5	0	+	+	+	+	0	0
4-5.5	0	0	+	0	+	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1821

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	1	+	1	0	0	3
1-1.5	31	23	7	2	+	+	+
2-2.5	2	5	5	+	0	+	+
3-3.5	0	+	+	0	0	0	0
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

413

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	1	+	0	0	3
1-1.5	31	21	6	2	1	+	+
2-2.5	2	4	5	2	1	+	+
3-3.5	+	1	1	+	0	0	+
4-5.5	0	+	0	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

836

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	0	0	0	0	2
1-1.5	31	15	4	2	1	1	0
2-2.5	2	11	11	1	0	1	0
3-3.5	0	0	1	2	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

178

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	+	+	0	0	0	3
1-1.5	28	23	6	3	1	1	1
2-2.5	5	7	4	2	2	+	0
3-3.5	+	1	+	1	0	0	0
4-5.5	0	0	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

495

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	0	0	0	0	2
1-1.5	19	13	4	1	0	0	1
2-2.5	8	21	9	3	2	1	0
3-3.5	0	4	2	4	1	0	0
4-5.5	0	1	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

160

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

HT

MAY

INSUFFICIENT DATA

V

PERIOD (SECONDS)					
7	9	11	13	>13	IND
1	0	*	0	0	1
19	5	2	1	*	8
17	9	3	*	*	2
4	5	2	*	0	*
*	2	1	*	0	0
0	0	0	0	0	0
0	0	0	0	0	0

4024

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	6	6	0	0	0	5
1-1.5	*	10	25	1	*	0	11
2-2.5	0	3	17	1	*	*	2
3-3.5	0	1	9	1	*	0	0
4-5.5	0	*	4	1	*	*	0
6-7.5	0	*	*	*	0	0	0
8-9.5	0	0	*	0	0	0	0
>10	0	0	0	0	0	0	0

1405

1

2

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	3	1	1	0	0	1
1-1.5	10	24	3	4	3	0	0
2-2.5	1	7	8	5	*	*	0
3-3.5	0	3	1	1	0	0	0
4-5.5	0	1	1	2	*	0	0
6-7.5	0	*	*	*	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

272

3

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	31	3	*	*	0	0	8
1-1.5	23	14	3	*	*	0	1
2-2.5	5	4	2	*	*	0	*
3-3.5	1	2	*	*	*	0	0
4-5.5	0	*	1	0	*	*	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1248

4

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	1	*	0	0	22
1-1.5	21	8	3	1	1	0	4
2-2.5	4	5	3	*	0	*	2
3-3.5	1	2	2	*	0	0	*
4-5.5	*	1	*	0	0	0	1
6-7.5	0	0	0	0	0	*	*
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

789

5

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	2	1	*	0	0	10
1-1.5	17	9	6	1	1	*	3
2-2.5	2	6	8	1	1	0	1
3-3.5	*	1	2	1	*	*	*
4-5.5	*	1	1	1	*	0	1
6-7.5	0	*	*	*	*	0	*
8-9.5	0	0	*	*	*	*	*
>10	0	0	0	0	0	0	0

915

9

PERIOD (SECONDS)					
7	9	11	13	>13	IND
1	0	0	0	0	29
4	1	0	0	0	26
1	0	1	0	0	2
1	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

185

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	2	*	*	0	0	2
1-1.5	11	14	7	3	1	*	5
2-2.5	4	15	6	2	*	*	4
3-3.5	1	6	4	1	1	*	1
4-5.5	*	*	2	1	*	*	*
6-7.5	0	0	*	*	0	*	0
8-9.5	0	0	*	0	0	0	0
>10	0	0	0	0	*	0	0

1216

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	*	*	0	0	1
1-1.5	13	21	8	1	*	0	1
2-2.5	3	8	10	4	1	*	*
3-3.5	*	4	4	3	1	*	*
4-5.5	*	1	3	1	1	*	*
6-7.5	0	*	*	*	1	*	0
8-9.5	0	0	*	*	*	*	0
>10	0	0	0	0	*	0	0

2312

12

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	2	*	*	0	0	3
1-1.5	15	15	6	2	1	*	1
2-2.5	3	8	10	3	1	*	*
3-3.5	1	3	4	3	1	*	*
4-5.5	*	1	1	2	1	1	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1526

13

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	1	*	0	0	2
1-1.5	12	16	7	1	*	1	1
2-2.5	3	10	10	4	1	*	1
3-3.5	1	4	4	3	1	*	*
4-5.5	0	2	3	2	1	*	*
6-7.5	0	*	*	*	*	0	*
8-9.5	0	0	0	0	0	0	*
>10	0	0	0	0	0	0	0

1239

14

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	*	*	0	0	3
1-1.5	23	18	4	2	1	0	2
2-2.5	5	9	8	2	1	*	1
3-3.5	1	2	3	1	*	*	*
4-5.5	*	1	1	1	*	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	0	*	0	0	0
>10	0	0	0	0	0	0	0

2142

15

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	0	*	0	0	29
1-1.5	33	10	1	0	*	0	1
2-2.5	2	3	2	0	0	0	0
3-3.5	0	*	*	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

429

19

PERIOD (SECONDS)					
7	9	11	13	>13	IND
4	1	*	0	0	4
23	10	1	1	*	1
7	6	3	*	*	*
2	2	2	1	*	*
*	1	*	*	*	0
0	*	0	*	*	0
1	*	0	0	0	0
0	0	*	0	0	0

1656

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	*	0	0	0	0	21
1-1.5	22	11	5	0	0	0	11
2-2.5	0	2	0	0	0	0	1
3-3.5	*	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

255

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	1	*	0	0	2
1-1.5	18	16	8	1	1	*	1
2-2.5	4	9	8	2	1	*	1
3-3.5	1	3	3	3	*	*	*
4-5.5	*	1	1	1	*	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	*	0	0	0	0
>10	0	0	0	0	0	0	0

2945

22

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	22	17	6	1	1	*	1
2-2.5	6	11	8	2	1	0	1
3-3.5	1	3	3	2	*	*	*
4-5.5	*	1	1	*	1	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1713

23

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	*	*	0	0	2
1-1.5	19	16	6	1	1	*	2
2-2.5	5	10	7	2	1	1	1
3-3.5	1	3	3	1	1	*	*
4-5.5	*	1	1	*	1	0	*
6-7.5	0	*	*	0	*	*	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1130

24

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	*	1	0	0	3
1-1.5	25	13	5	2	1	*	2
2-2.5	5	9	8	3	1	1	1
3-3.5	1	2	2	1	1	1	*
4-5.5	*	*	1	1	*	*	0
6-7.5	0	0	*	*	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1204

25

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	*	1	*	0	0	3
1-1.5	22	15	6	2	1	*	1
2-2.5	4	10	8	3	1	1	1
3-3.5	1	3	2	1	1	1	*
4-5.5	*	1	1	1	*	*	0
6-7.5	0	*	0	0	*	*	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1518

29

PERIOD (SECONDS)					
7	9	11	13	>13	IND
7	*	*	0	0	3
22	5	*	*	0	1
7	5	2	*	*	2
1	1	1	*	*	0
*	*	*	*	0	0
0	*	0	*	0	0
0	0	0	0	0	0
0	0	0	0	0	0

1572

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	1	*	0	0	2
1-1.5	25	16	7	1	1	*	2
2-2.5	3	8	6	2	1	1	*
3-3.5	*	1	2	*	*	*	0
4-5.5	0	*	*	0	*	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1222

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	*	*	0	0	1
1-1.5	28	15	6	2	1	*	1
2-2.5	4	8	8	2	1	*	1
3-3.5	*	2	2	2	*	*	*
4-5.5	*	*	0	*	0	0	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1452

32

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	1	*	0	0	2
1-1.5	27	20	7	2	1	*	2
2-2.5	6	9	5	2	1	*	1
3-3.5	*	1	1	*	*	*	*
4-5.5	*	*	*	0	0	0	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

3695

33

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	*	1	0	0	2
1-1.5	21	17	10	3	1	*	6
2-2.5	4	7	8	3	*	*	2
3-3.5	*	1	1	2	*	*	*
4-5.5	0	*	*	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1596

34

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	39	3	1	*	0	0	6
1-1.5	22	14	3	1	*	*	*
2-2.5	1	4	3	1	*	*	*
3-3.5	*	*	*	*	*	0	0
4-5.5	0	*	*	*	0	0	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

3706

35

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	2	*	*	0	0	6
1-1.5	23	16	4	1	*	*	1
2-2.5	2	5	6	2	*	*	*
3-3.5	*	1	1	*	*	*	*
4-5.5	*	*	*	*	*	*	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	*	0	0
>10	0	0	0	0	0	0	0

3944

39

PERIOD (SECONDS)					
7	9	11	13	>13	IND
1	0	0	0	0	2
15	4	2	1	1	0
11	11	1	0	1	0
0	1	2	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0
0	0	0	0	0	0

178

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	*	*	*	0	0	3
1-1.5	28	23	6	3	1	1	1
2-2.5	5	7	4	2	2	*	0
3-3.5	*	1	*	1	0	0	0
4-5.5	0	0	0	0	*	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

495

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	0	0	0	0	0	2
1-1.5	19	13	4	1	0	0	1
2-2.5	8	21	9	3	2	1	0
3-3.5	0	4	2	4	1	0	0
4-5.5	0	1	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

160

42

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	2	*	*	0	0	1
1-1.5	28	22	7	1	*	1	3
2-2.5	4	9	8	1	1	*	1
3-3.5	0	1	2	1	*	0	0
4-5.5	0	0	*	*	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

718

43

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	21	3	1	*	0	0	4
1-1.5	27	18	7	2	1	1	4
2-2.5	2	3	3	1	1	0	*
3-3.5	0	1	0	*	*	0	0
4-5.5	0	*	0	0	*	0	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

758

44

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	48	3	1	*	0	0	15
1-1.5	17	8	2	*	*	*	2
2-2.5	1	2	1	0	0	0	0
3-3.5	0	0	*	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

1674

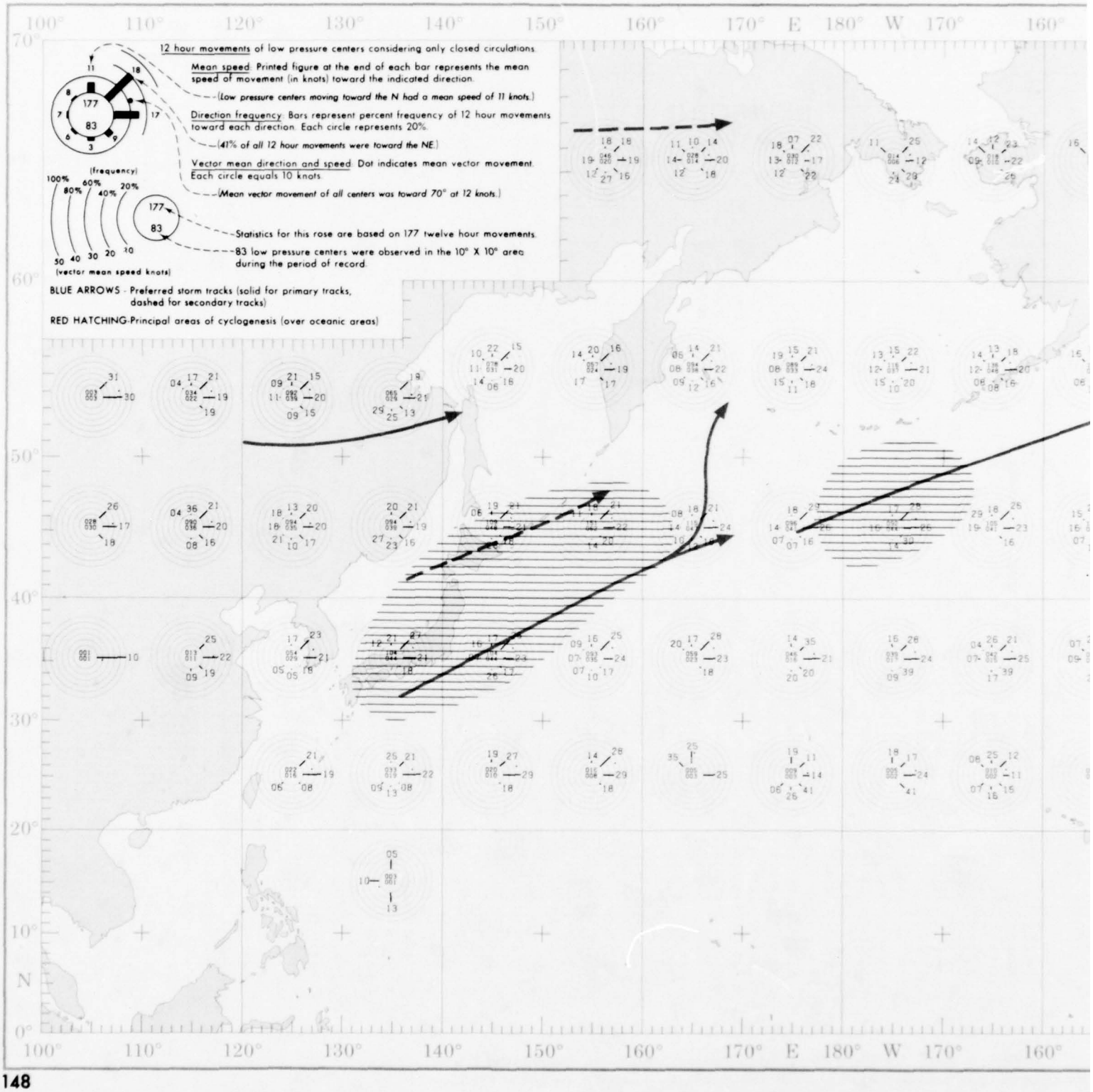
45

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	51	3	8	0	0	0	19
1-1.5	11	5	0	0	0	0	0
2-2.5	0	3	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
>10	0	0	0	0	0	0	0

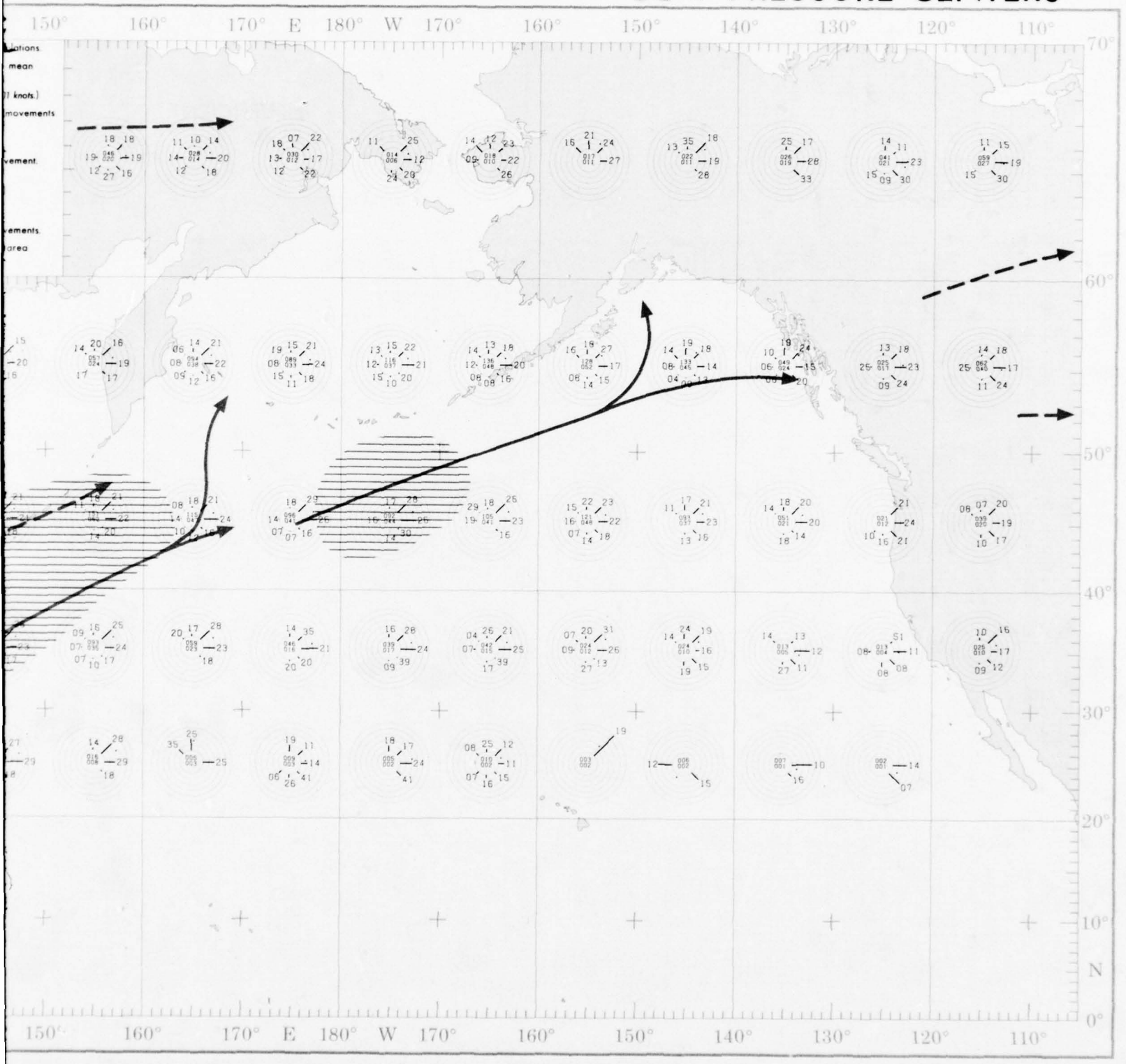
37

t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

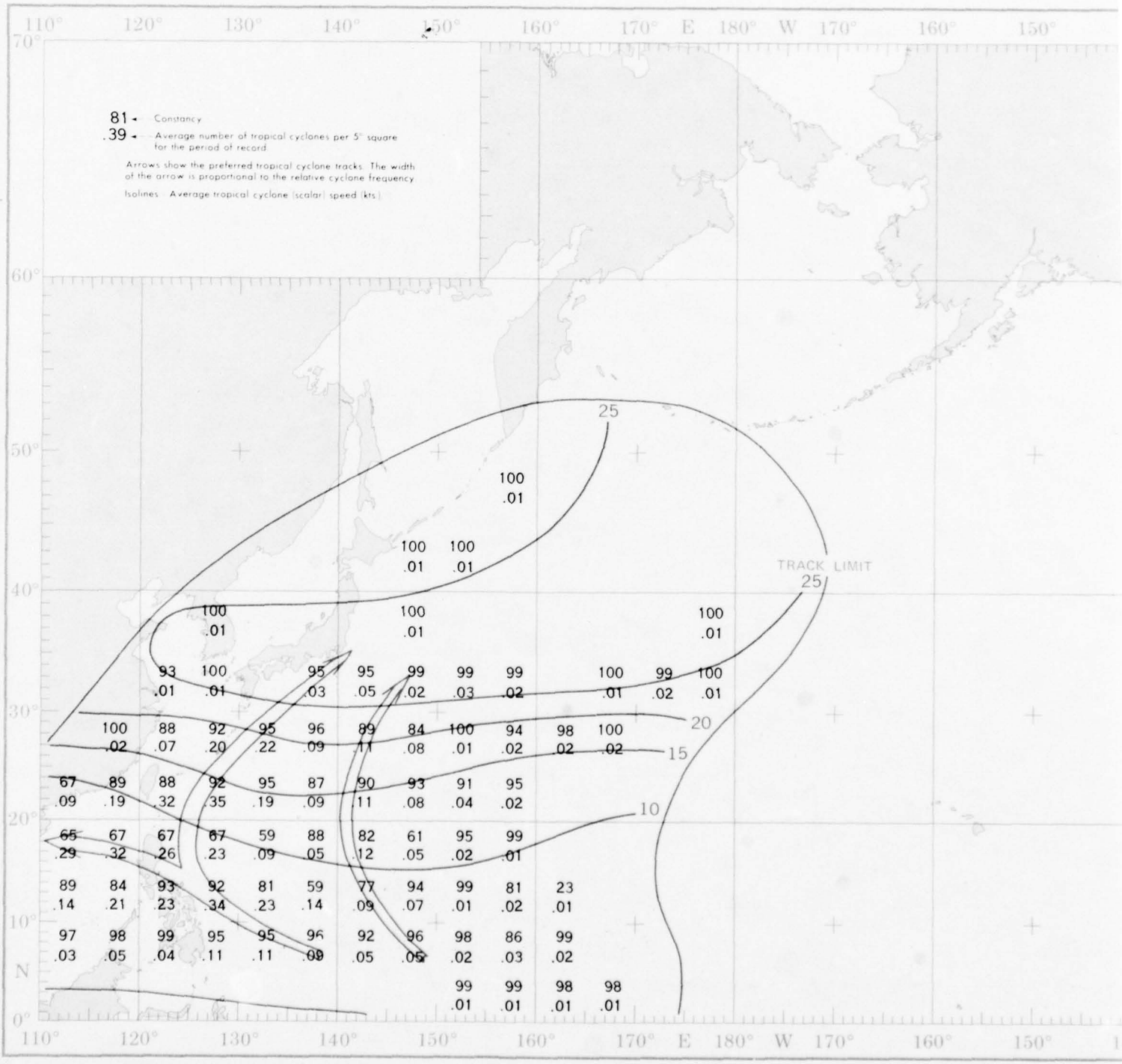
MAY

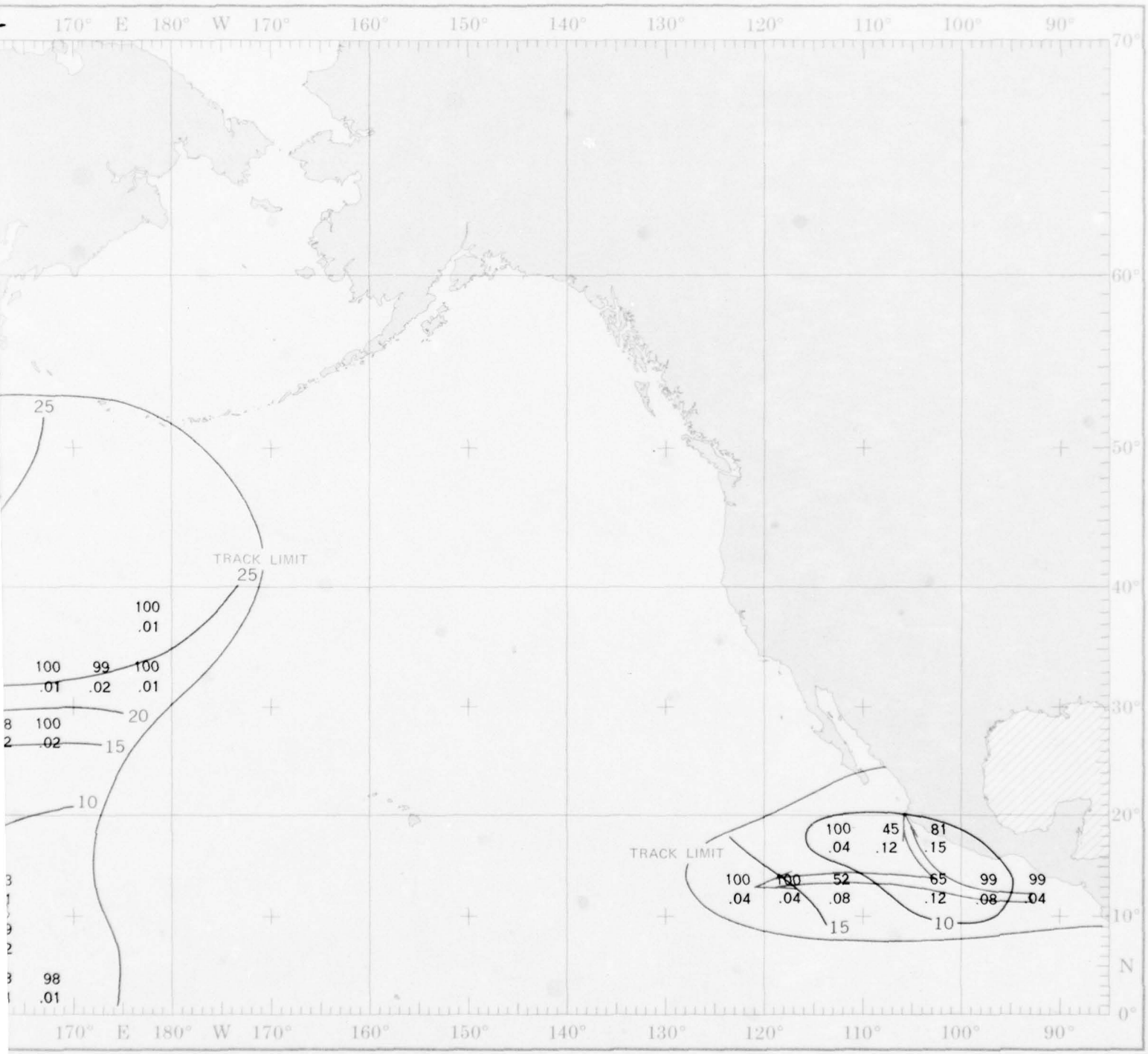

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

LOW PRESSURE CENTERS

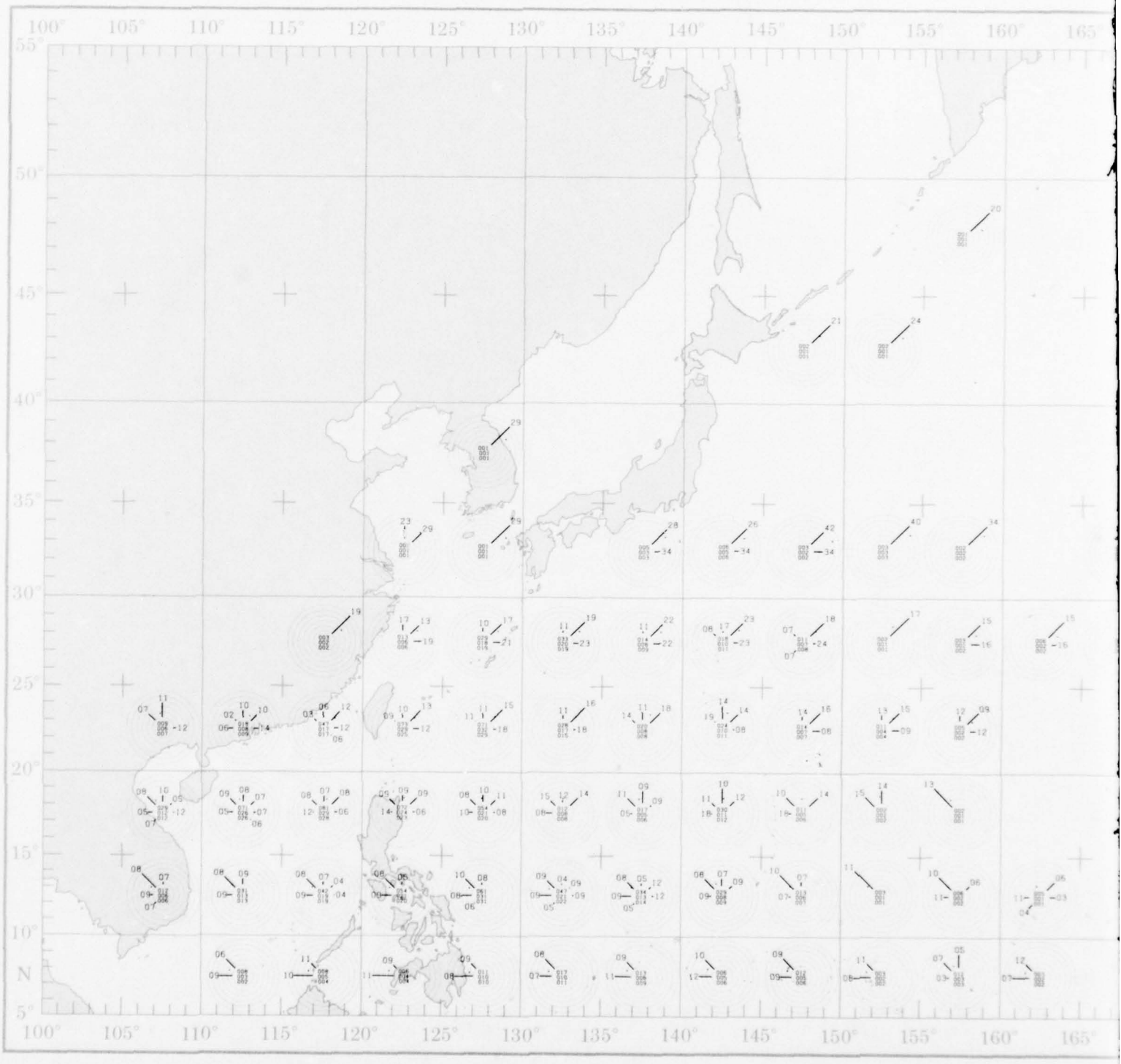


TROPICAL CYCLONE CHARACTERISTICS

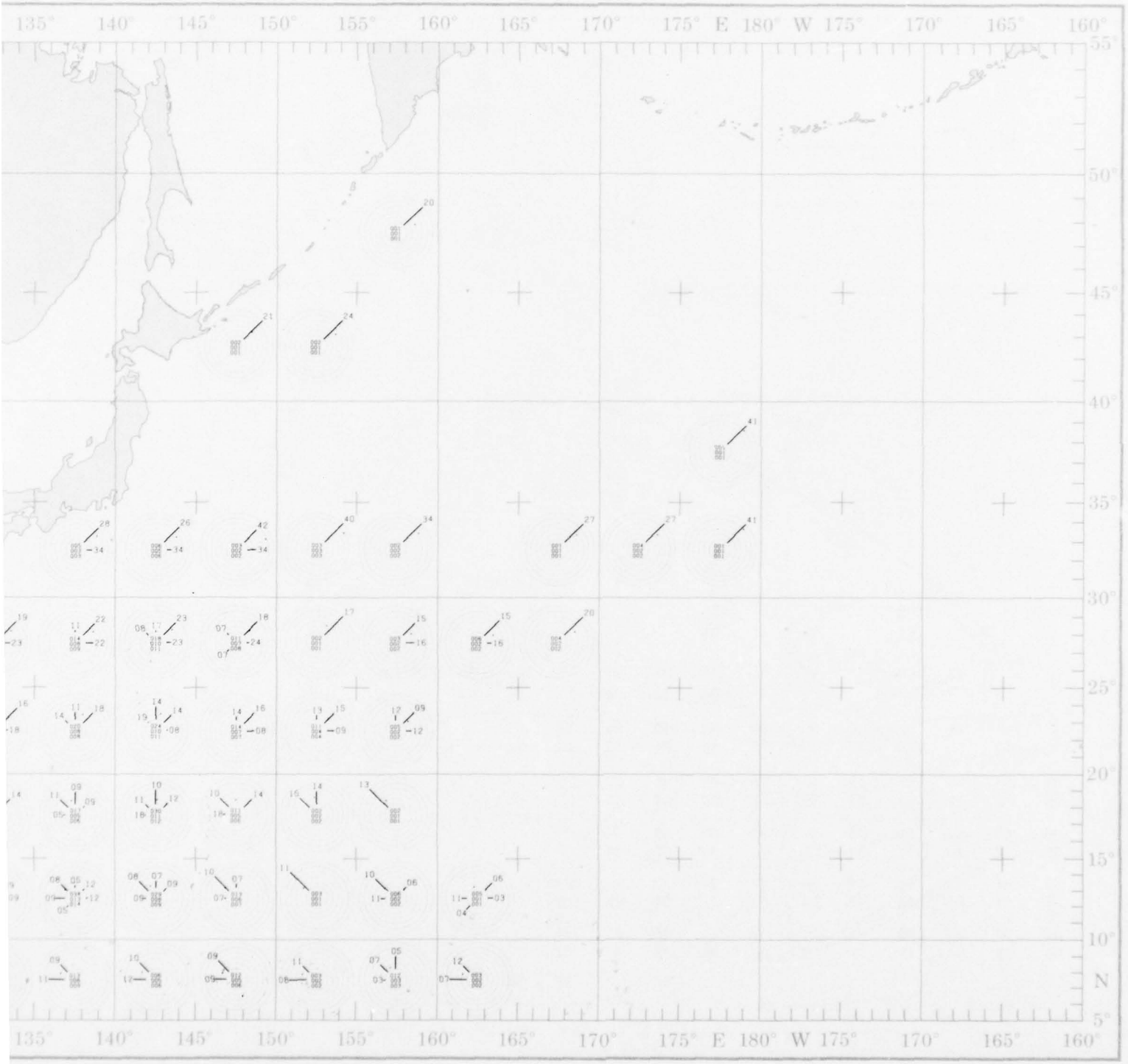



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
N
0°
25
TRACK LIMIT
25
100
.01
100 99 100
.01 .02 .01
20
100
.02
15
10
98
.01
TRACK LIMIT
100 45 81
.04 .12 .15
100 100 52 65 99 99
.04 .04 .08 .12 .08 .04
15
10

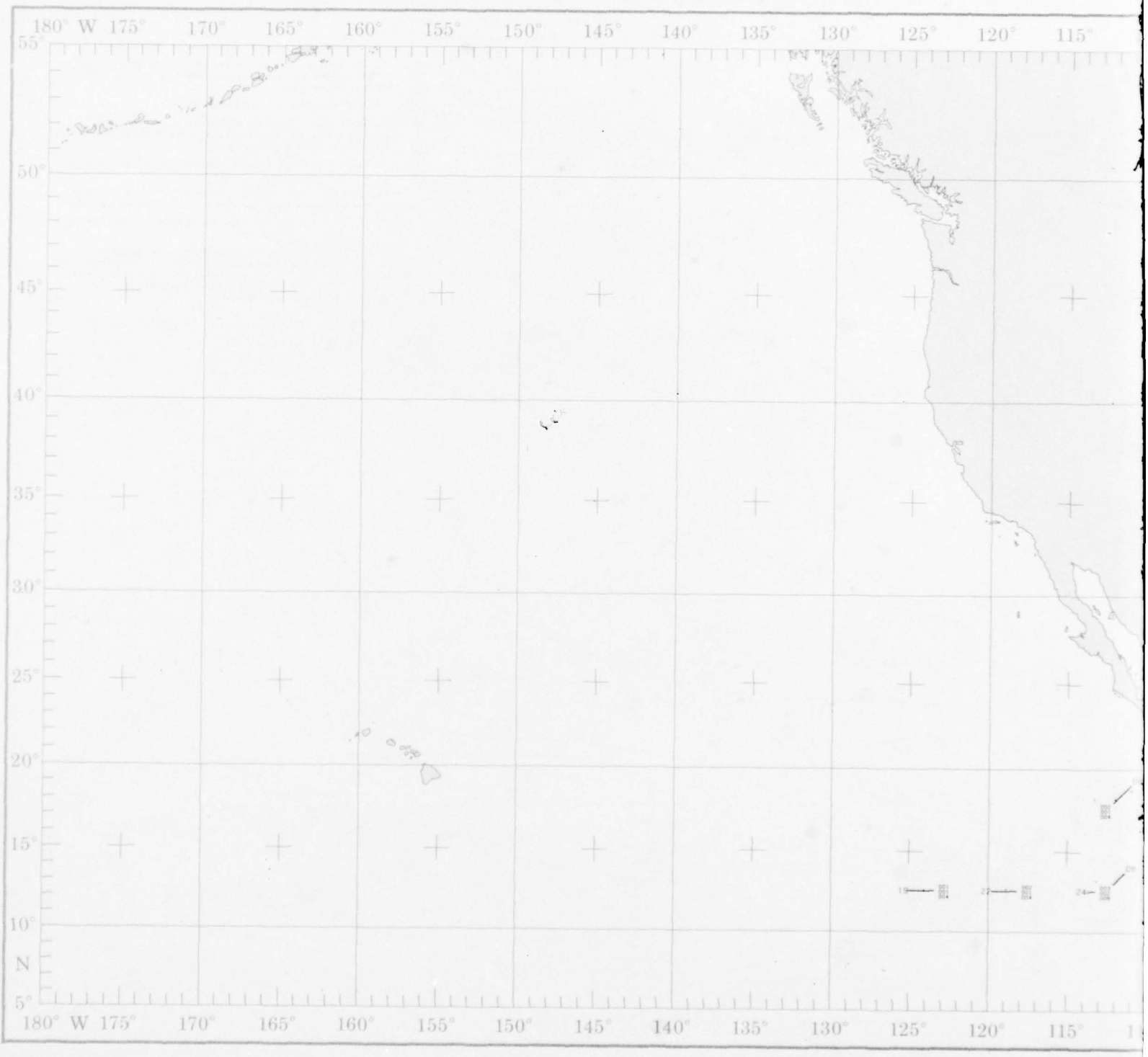
MAY


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

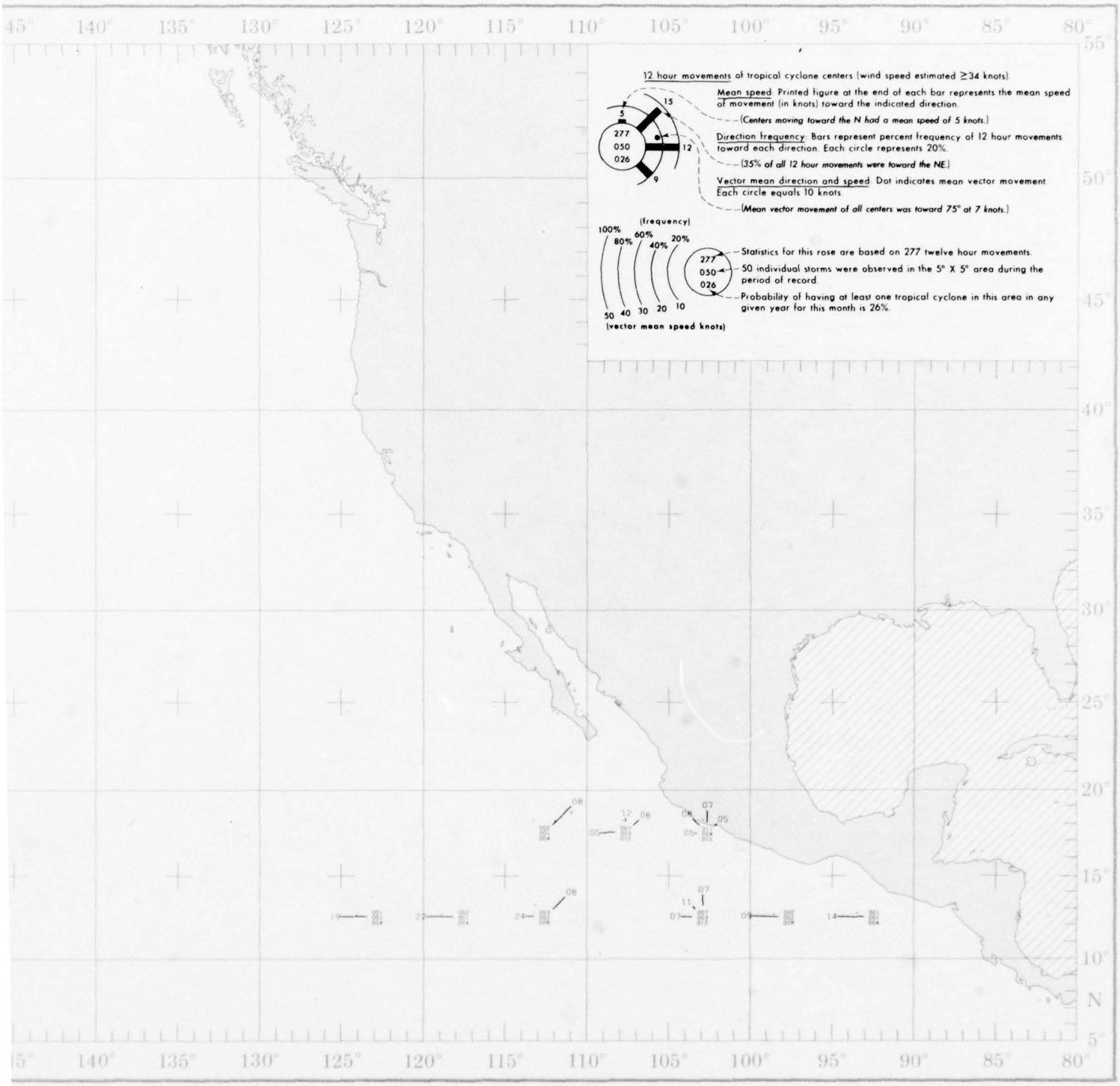
TROPICAL CYCLONE



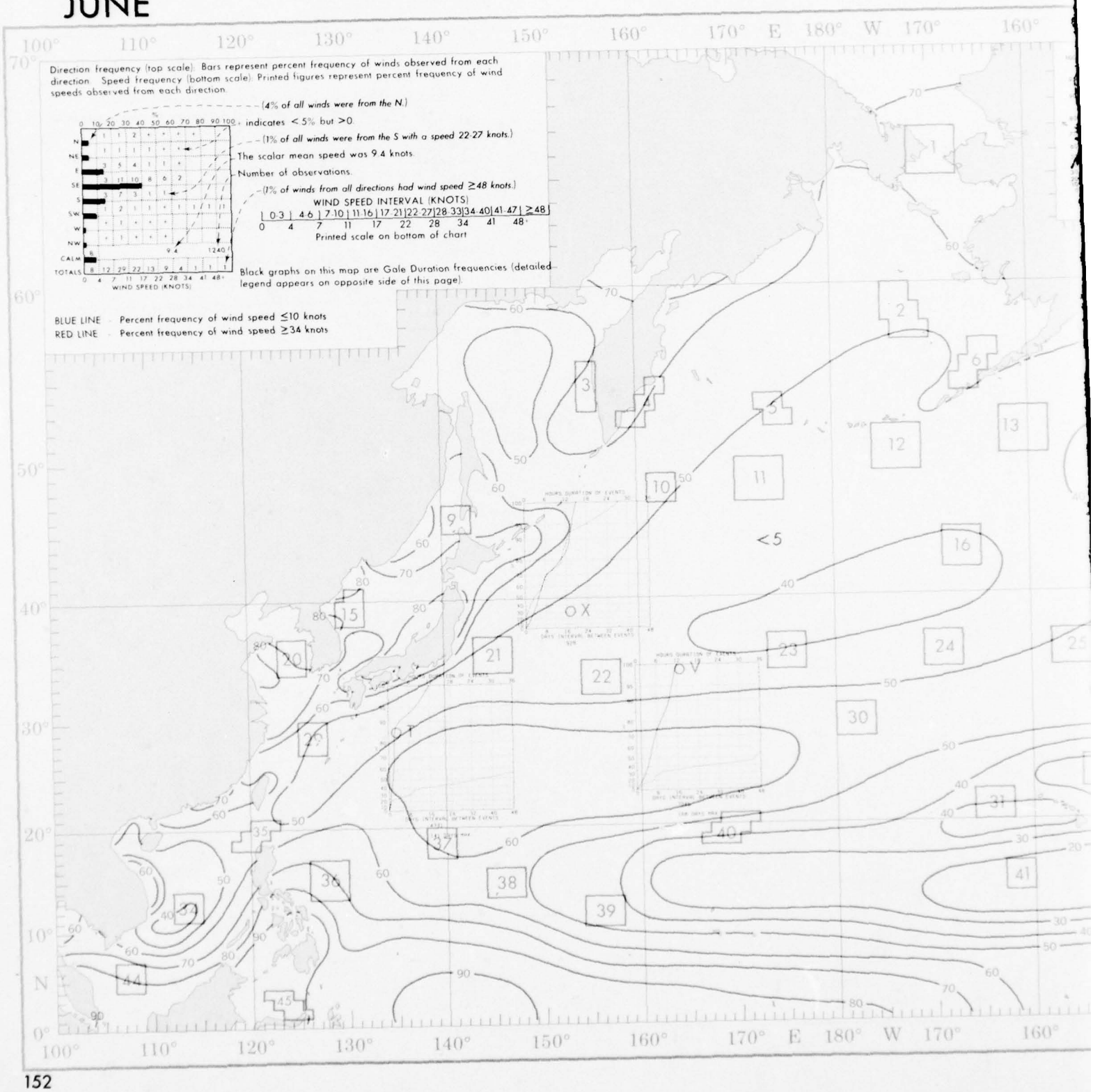
TROPICAL CYCLONE



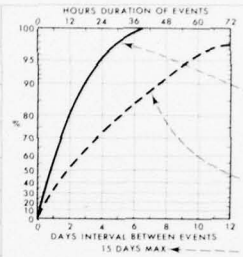
MAY


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.
45°
140°
135°
130°
125°
120°
115°
110°
105°
100°
95°
90°
85°
80°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
5°
N

JUNE


Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
indicates < 5% but >0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
N
NE
E
SE
S
SW
W
NW
CALM
TOTALS
WIND SPEED (KNOTS)
<5
OX
OV
OT

SURFACE WINDS



Hours duration of gales - Days interval between gales.

Cumulative percent frequency of hours duration of gales equal to or less than the number of hours intersected by the solid curve refers to the top scale.

(98% of gales had a duration ≤30 hours.)

Cumulative percent frequency of days interval between gales equal to or less than the number of days intersected by the broken curve refers to the bottom scale.

(88% of gales were followed by another gale in 7 days or less.)

Top and bottom scales are variable.
The maximum value(s) of hours duration and/or days interval will be displayed below the graph when the graph limits are exceeded.

(100% of gales were followed by another gale in 15 days or less.)

Durations and intervals for a particular month extend from the time they begin (or the first of the month if already in progress) and are terminated at the actual ending time, regardless of what month that may be.

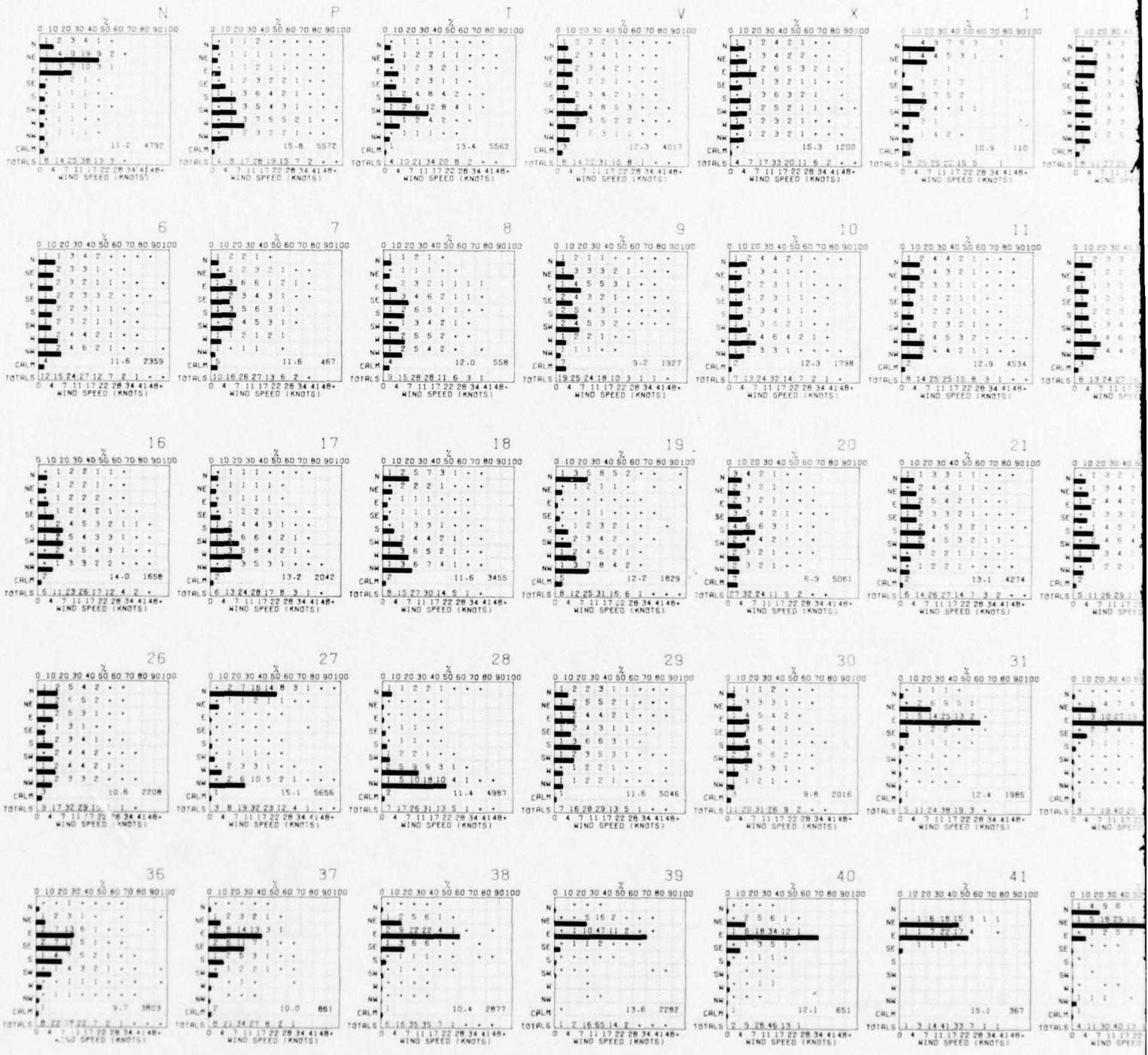
≥48

etailed

<5

NO EVENTS REPORTED

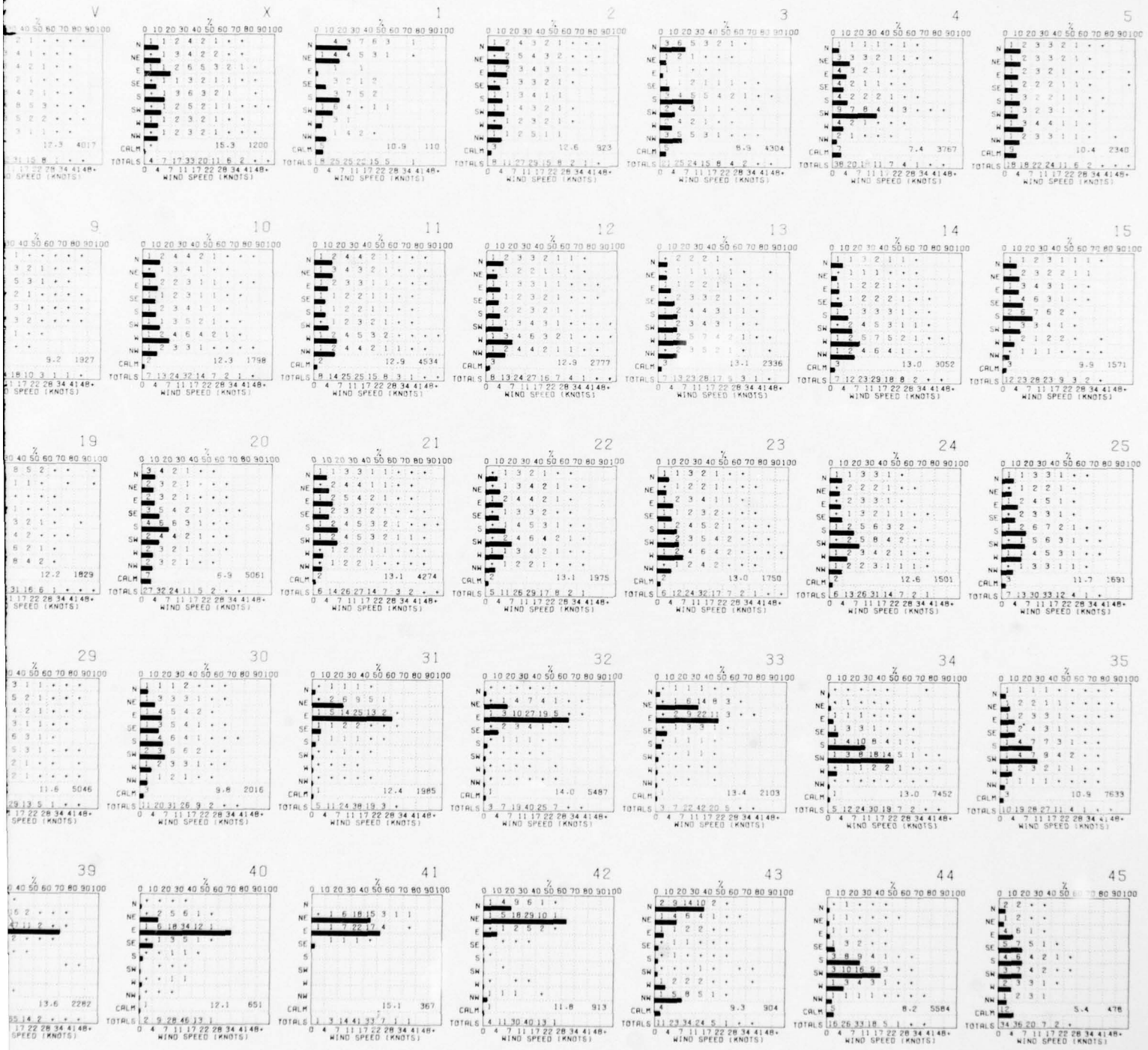
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

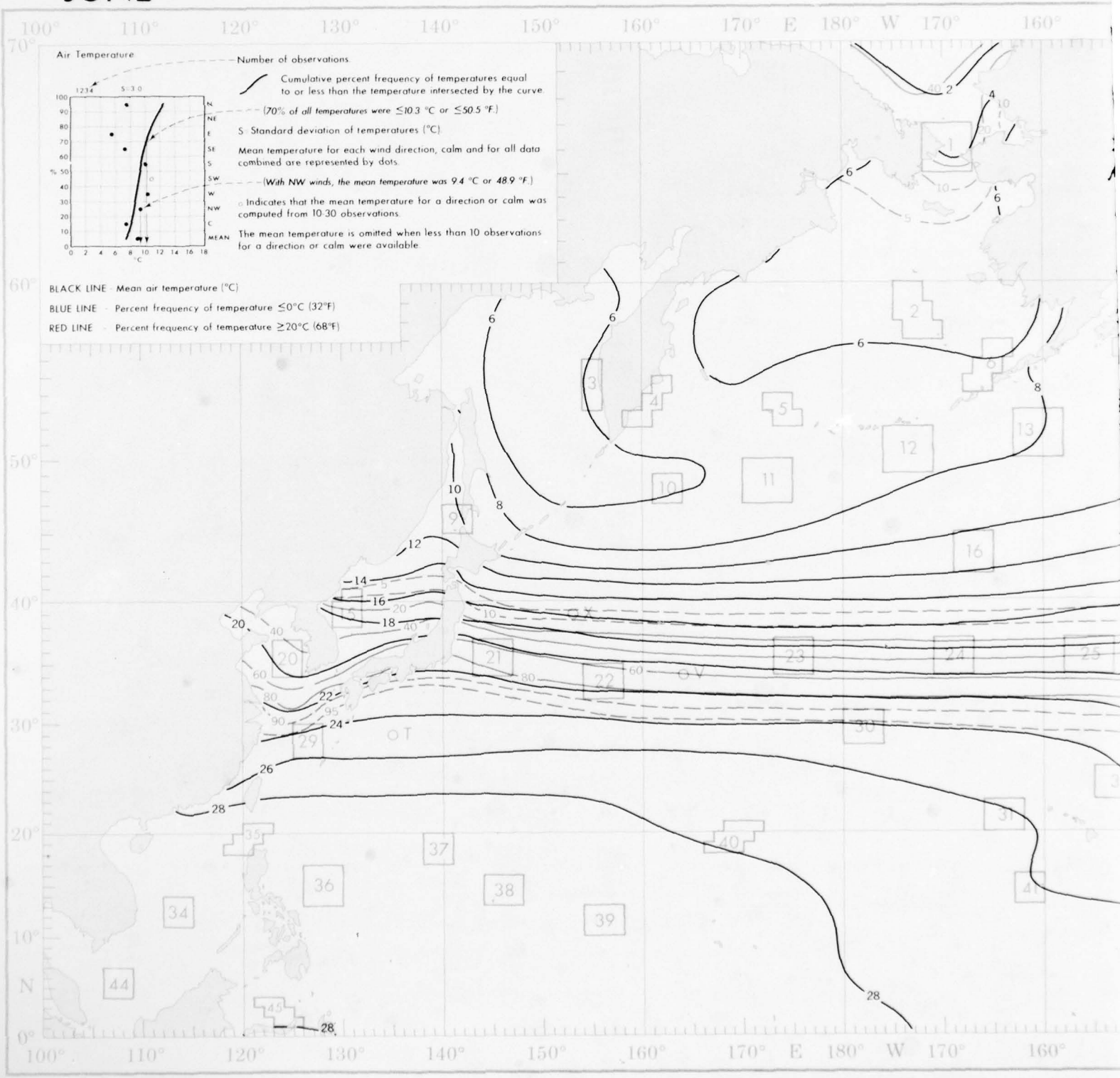
ED

JUNE

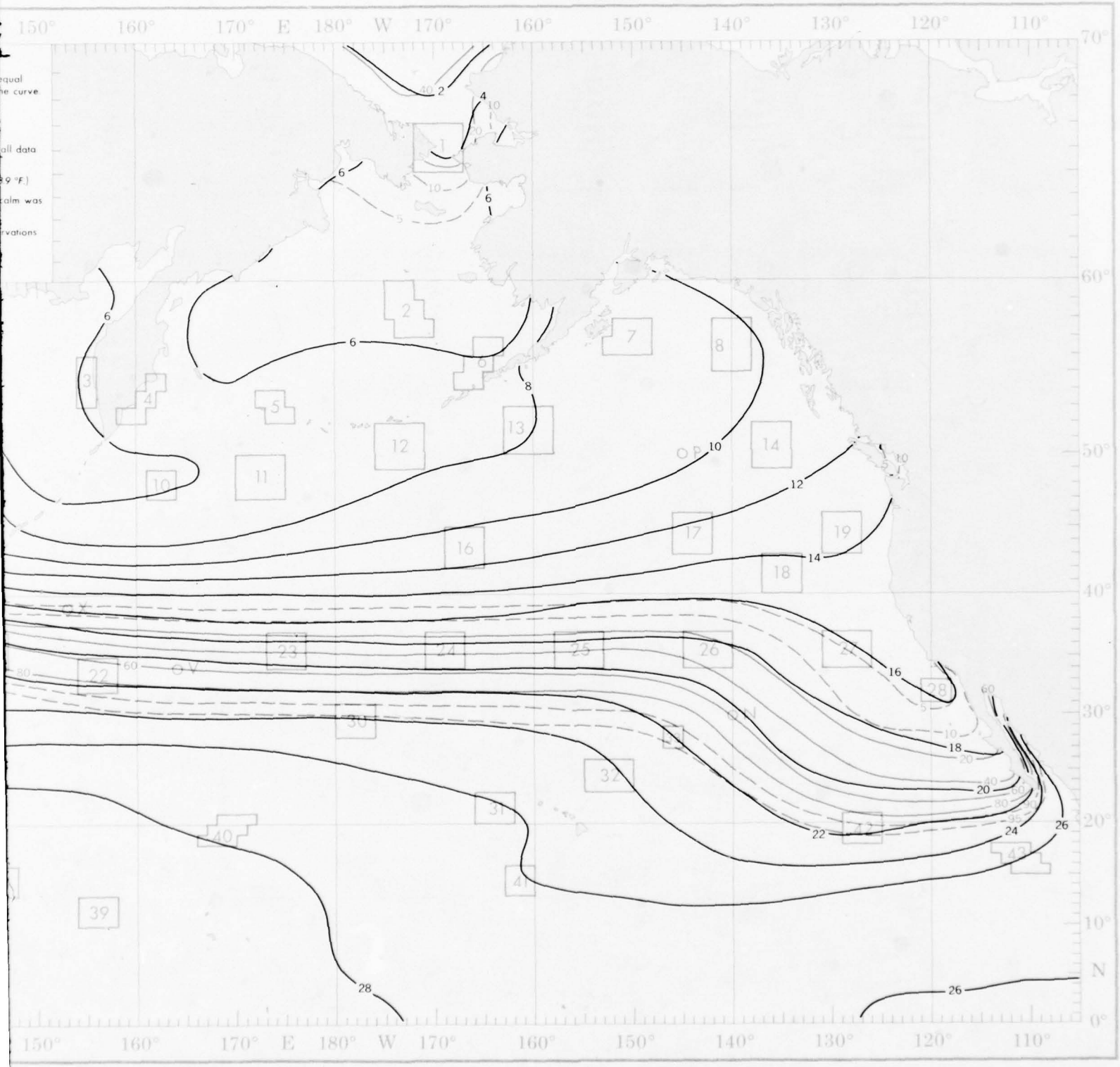


e objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

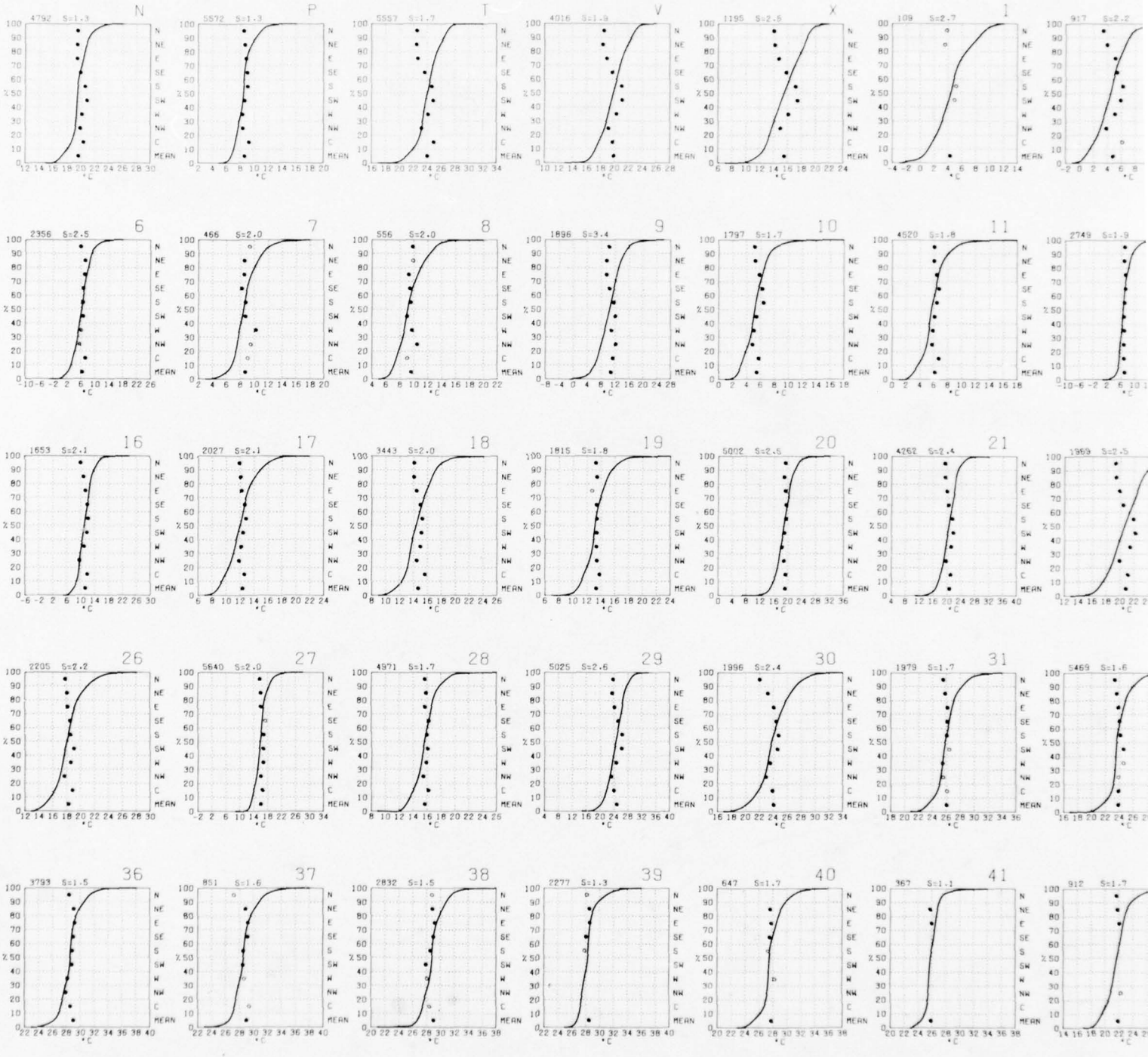
JUNE


Air Temperature
Number of observations
1234
S=3.0
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S: Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
N
NE
E
SE
S
SW
W
NW
C
MEAN
% 50
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160°
70°
60°
50°
40°
30°
20°
10°
N
0°
6
8
10
12
14
16
18
20
22
24
26
28
2
4
OV
OT

SURFACE AIR TEMPERATURE

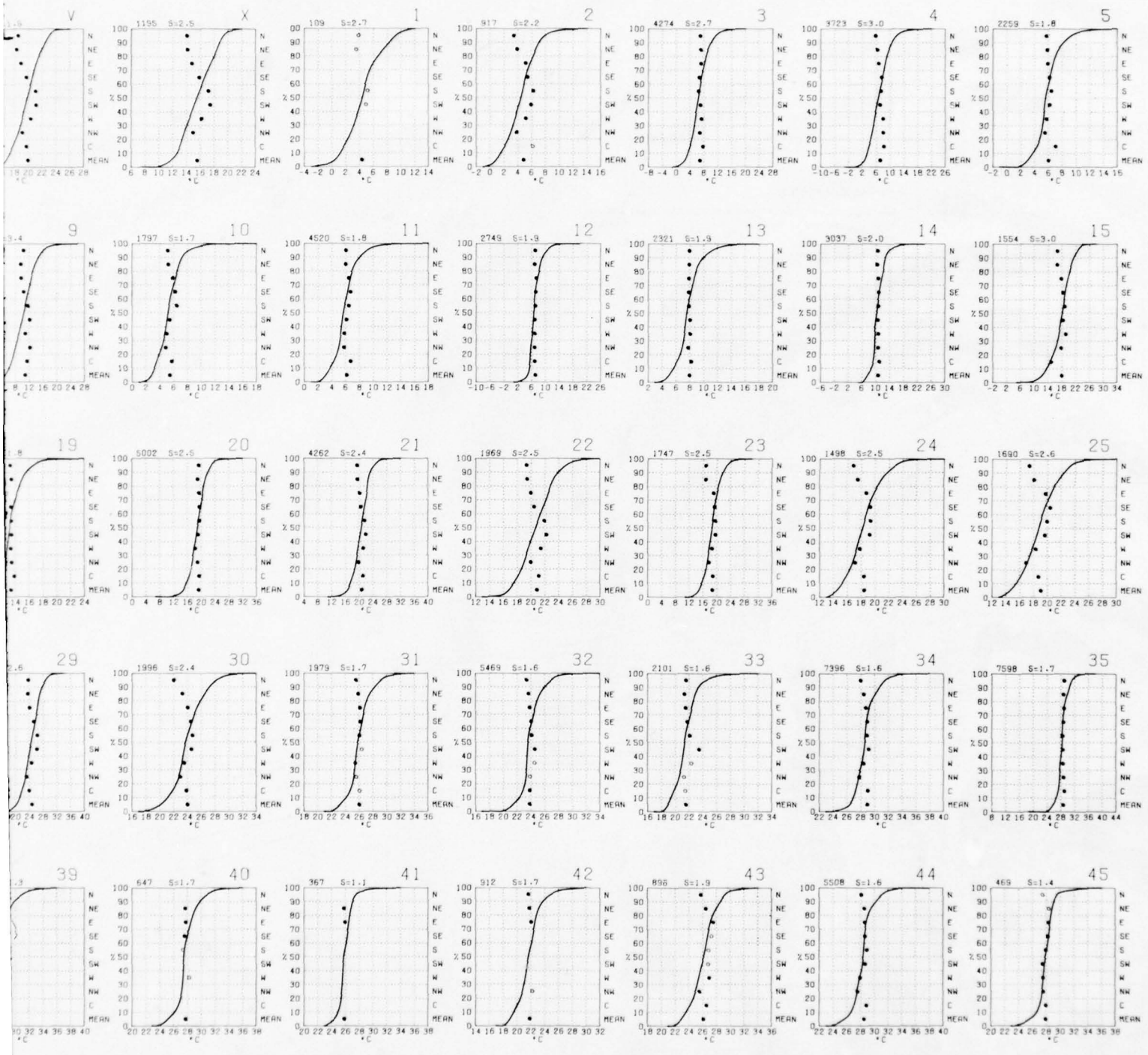


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

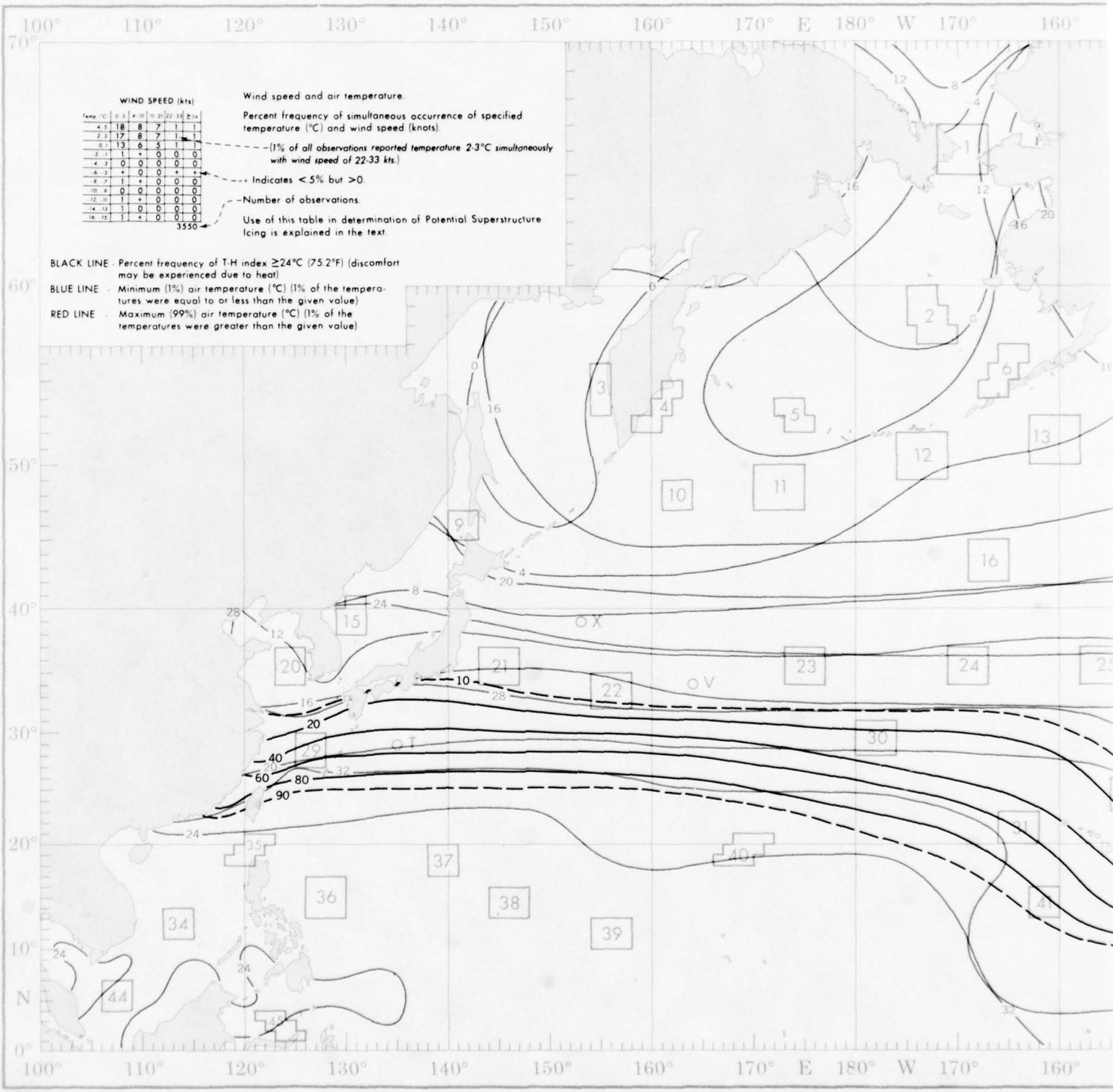
JUNE



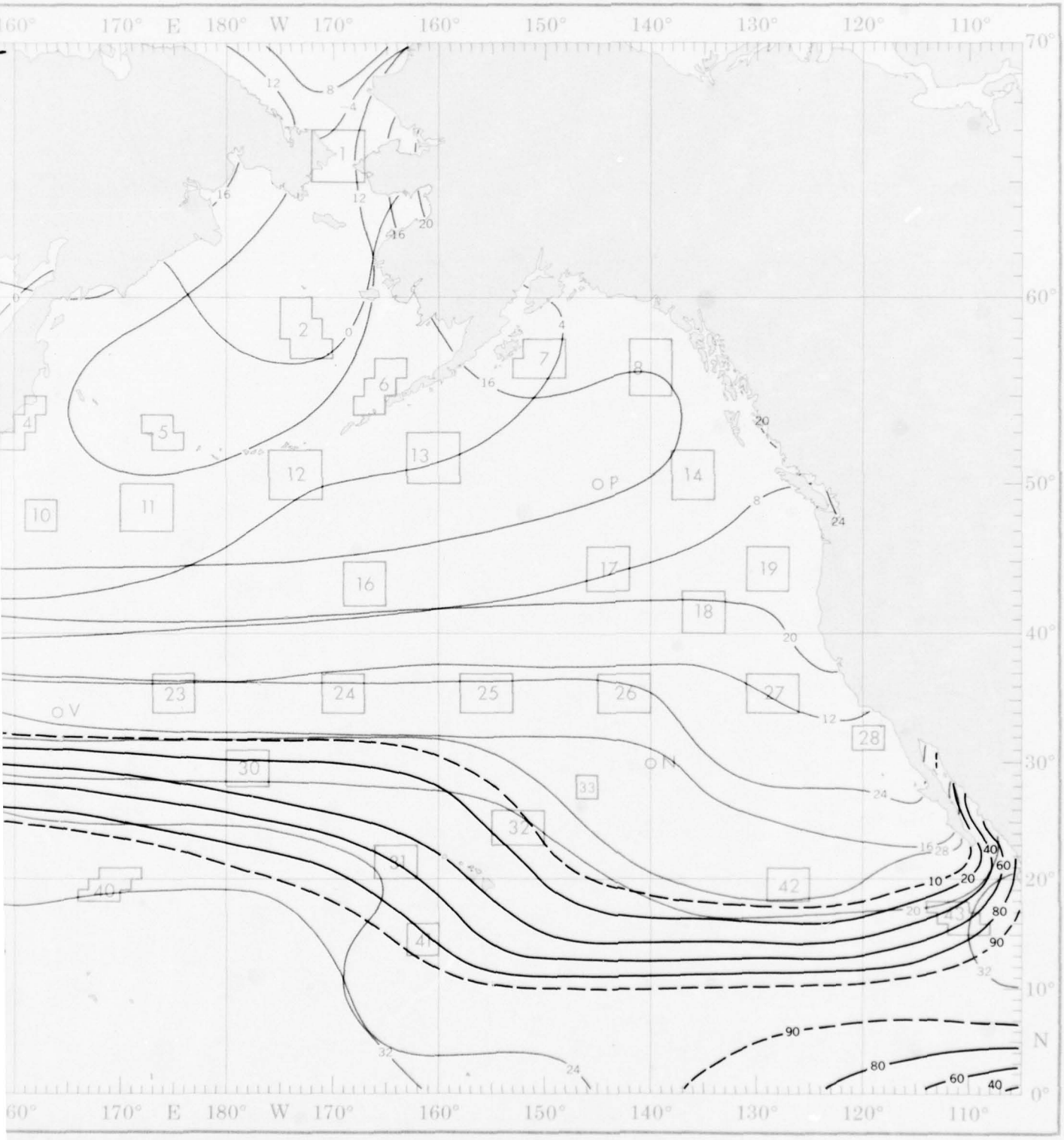
he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	+	0	0
22.23	1	5	4	+	0
20.21	4	16	19	1	0
18.19	2	16	25	2	0
16.17	+	1	2	+	0
14.15	+	0	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

4792

P

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	0	0
12.13	+	1	1	1	+
10.11	1	5	9	4	+
8.9	3	15	28	14	1
6.7	1	3	8	4	+
4.5	0	0	+	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

5572

T

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	+	1	1	0	0
26.27	1	7	14	2	+
24.25	1	10	21	5	+
22.23	2	12	16	2	+
20.21	+	1	2	1	0
18.19	+	+	+	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

5557

V

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	0	0	0	0
24.25	+	1	1	+	0
22.23	2	7	10	2	+
20.21	3	13	17	3	+
18.19	2	12	13	2	+
16.17	1	4	5	1	+
14.15	+	+	+	+	0
12.13	+	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4016

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	0	+	+
20.21	+	1	3	2	+
18.19	1	5	11	2	0
16.17	1	6	16	5	1
14.15	1	6	12	5	+
12.13	1	5	10	3	1
10.11	+	1	2	+	+
8.9	0	+	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1195

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	1	0
10.11	0	3	0	0	1
8.9	1	6	1	0	0
6.7	2	10	6	0	0
4.5	3	17	14	0	0
2.3	2	9	7	3	0
0.1	1	3	7	2	0
-2.-1	0	1	0	0	0
-4.-3	0	0	1	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

109

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	+	+		
10.11	+	1	1		
8.9	1	3	3		
6.7	2	11	15		
4.5	3	14	14		
2.3	1	7	8		
0.1	0	2	2		
-2.-1	0	0	0		
-4.-3	0	0	0		
-6.-5	0	0	0		
-8.-7	0	0	0		

6

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	+	+	0	0	0
14.15	+	+	+	0	0
12.13	1	1	+	0	0
10.11	1	4	2	+	+
8.9	3	9	7	1	+
6.7	4	14	15	4	+
4.5	2	7	10	2	+
2.3	1	3	4	1	+
0.1	+	+	1	+	0
-2.-1	+	0	0	0	0

2356

7

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	0	0	0	0
16.17	+	+	0	0	0
14.15	+	0	+	0	0
12.13	1	4	3	0	0
10.11	3	10	7	1	0
8.9	4	17	19	4	+
6.7	2	10	9	2	0
4.5	0	+	1	+	+
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

466

8

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	1	0	0	0
14.15	+	2	1	0	0
12.13	1	7	4	1	0
10.11	3	13	12	2	1
8.9	2	17	16	5	1
6.7	2	4	5	1	0
4.5	0	+	+	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

556

9

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	+	0	0
22.23	0	+	+	0	0
20.21	+	+	+	0	0
18.19	+	1	+	0	0
16.17	2	2	1	+	+
14.15	2	6	4	1	+
12.13	4	12	5	1	+
10.11	4	11	6	1	+
8.9	4	9	5	1	+
6.7	1	4	4	1	+
≤5	1	2	2	+	+

1896

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	+	+	0	0
12.13	+	+	+	0	0
10.11	+	1	1	+	0
8.9	1	3	4	1	+
6.7	2	15	17	3	+
4.5	3	15	21	4	+
2.3	+	3	4	1	0
0.1	+	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1797

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	+	0	0
14.15	+	+	+	0	0
12.13	+	1	+	+	0
10.11	+	2	1	+	0
8.9	2	5	6	1	+
6.7	3	18	17	5	+
4.5	2	11	14	5	1
2.3	+	1	1	+	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

4524

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0		
16.17	+	+	+		
14.15	0	+	+		
12.13	+	1	+		
10.11	+	4	3		
8.9	2	11	12		
6.7	4	19	22		
4.5	1	4	6		
2.3	0	+	+		
0.1	0	0	0		
-2.-1	0	0	0		

16

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	0	0	0
18.19	0	+	+	0	0
16.17	+	1	1	+	0
14.15	1	3	4	2	+
12.13	2	11	14	4	1
10.11	1	12	16	5	1
8.9	1	6	8	3	+
6.7	+	+	+	1	+
4.5	0	0	0	+	0
2.3	0	0	0	0	0

1654

17

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	0	0
18.19	+	+	1	+	0
16.17	1	3	2	1	0
14.15	1	7	8	1	+
12.13	2	15	18	4	+
10.11	1	9	12	3	+
8.9	+	2	3	1	+
6.7	0	+	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

2027

18

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	0	0
20.21	+	1	+	+	0
18.19	1	3	2	+	+
16.17	2	10	11	1	+
14.15	3	16	17	2	+
12.13	1	10	12	2	+
10.11	+	1	1	1	+
8.9	+	+	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3445

19

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	0	+	+	0	0
18.19	+	1	1	0	0
16.17	1	5	4	1	+
14.15	3	12	12	2	+
12.13	3	16	26	3	+
10.11	1	3	4	2	+
8.9	+	+	1	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1817

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	+	+	+	0	0
26.27	+	+	+	0	0
24.25	1	2	+	0	0
22.23	4	8	2	+	0
20.21	7	15	4	1	0
18.19	9	18	5	1	+
16.17	4	10	3	1	0
14.15	1	2	1	+	0
12.13	+	+	+	+	0
≤11	+	+	+	0	0

5004

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	+	+	0
26.27	+	1	1	+	+
24.25	1	3	4	1	+
22.23	2	10	12	3	1
20.21	2	15	12	3	+
18.19	1	8	9	3	+
16.17	+	3	3	1	+
14.15	+	+	+	+	+
12.13	0	+	+	0	+
10.11	0	0	0	0	0

4263

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+		
28.29	0	1	+		
26.27	+	1	1		
24.25	1	4	5		
22.23	1	10	12		
20.21	1	10	15		
18.19	1	9	10		
16.17	+	3	3		
14.15	0	+	+		
12.13	+	0	0		
10.11	0	0	0		

26

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	0	0	0
26.27	0	+	+	+	0
24.25	+	1	+	+	0
22.23	1	3	2	+	0
20.21	2	9	6	+	0
18.19	4	18	15	1	+
16.17	2	14	11	1	0
14.15	+	2	3	+	+
12.13	+	+	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

2205

27

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	0	+	+	0	0
22.23	+	1	1	+	0
20.21	+	1	2	+	0
18.19	1	6	7	2	+
16.17	1	11	24	7	+
14.15	1	7	17	5	+
12.13	+	1	4	2	+
10.11	0	+	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

5642

28

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	+	+	+	0
20.21	+	1	1	+	0
18.19	1	5	4	+	0
16.17	4	20	18	2	+
14.15	2	14	18	3	+
12.13	+	2	3	1	0
10.11	+	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

4972

29

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	1	+	+	0
30.31	+	1	1	+	0
28.29	+	5	7	1	0
26.27	1	11	12	2	+
24.25	2	12	11	2	+
22.23	2	9	9	1	+
20.21	1	3	2	1	+
18.19	+	1	1	+	0
16.17	0	+	+	+	0
14.15	0	0	+	0	0

5033

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	+	1	+	0	0
28.29	1	4	1	0	0
26.27	3	9	6	+	0
24.25	3	16	12	+	0
22.23	3	16	12	1	+
20.21	1	4	3	+	0
18.19	+	1	1	+	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1996

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	+	0
30.31	+	1	1	0	0
28.29	1	5	8	+	0
26.27	2	16	28	1	0
24.25	2	11	18	1	0
22.23	+	1	2	+	0
20.21	0	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1982

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+		
30.31	+	+	+		
28.29	+	1	1		
26.27	1	4	8		
24.25	1	10	25		
22.23	1	10	28		
20.21	+	1	2		
18.19	0	+	+		
16.17	0	0	+		
14.15	0	0	0		
12.13	0	0	0		

36

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	+	4	1	+	0
30.31	2	15	7	+	0
28.29	5	35	16	1	+
26.27	1	5	4	1	+
24.25	0	1	+	+	0
22.23	+	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3793

37

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	+	1	1	0	0
32.33	1	3	2	0	0
30.31	2	12	7	+	0
28.29	5	33	21	1	0
26.27	+	6	4	+	0
24.25	0	+	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

852

38

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	+	+	+	0	0
32.33	1	3	2	0	0
30.31	2	12	10	+	+
28.29	3	31	25	1	+
26.27	+	5	4	+	+
24.25	+	1	+	+	+
22.23	+	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2836

39

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	1	3	0	0
30.31	+	2	7	+	0
28.29	+	11	58	2	+
26.27	+	4	10	+	+
24.25	0	+	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2277

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	1	2	0	0
30.31	0	4	5	+	0
28.29	1	16	21	+	0
26.27	1	14	30	+	0
24.25	0	2	2	0	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

647

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	0	1	0	+
28.29	0	2	4	1	0
26.27	1	9	50	5	+
24.25	+	7	17	2	+
22.23	0	+	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

367

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+		
28.29	+	+	+		
26.27	+	1	1		
24.25	1	4	5		
22.23	1	18	24		
20.21	1	15	19		
18.19	+	3	4		
16.17	0	+	0		
14.15	0	0	0		
12.13	0	0	0		
10.11	0	0	0		

Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

RATURE

JUNE

WIND SPEED (KTS) V

11-21	22-33	≥ 34
0	0	0
1	+	0
10	2	+
17	3	+
13	2	+
5	1	+
+	+	0
0	0	0
0	0	0
0	0	0

4016

WIND SPEED (KTS) X

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	0	+	+
20.21	+	1	3	2	+
18.19	1	5	11	2	0
16.17	1	6	16	5	1
14.15	1	6	12	5	+
12.13	1	5	10	3	1
10.11	+	1	2	+	+
8.9	0	+	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1195

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	1	0
10.11	0	3	0	0	1
8.9	1	6	1	0	0
6.7	2	10	6	0	0
4.5	3	17	14	0	0
2.3	2	9	7	3	0
0.1	1	3	7	2	0
-2.-1	0	1	0	0	0
-4.-3	0	0	1	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

109

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	+	+	0	0
10.11	+	1	1	0	0
8.9	1	3	3	1	+
6.7	2	11	15	4	0
4.5	3	14	14	3	+
2.3	1	7	9	2	+
0.1	0	2	2	1	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

917

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	+	0	0	0
16.17	+	+	+	0	0
14.15	1	1	+	0	0
12.13	2	2	+	0	0
10.11	3	6	1	+	0
8.9	5	12	5	1	+
6.7	4	14	9	3	+
4.5	3	10	6	1	+
2.3	2	3	1	+	0
0.1	+	1	+	+	0
-2.-1	+	+	0	0	0

4275

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	+	0	0	0	0
18.19	+	0	0	0	0
16.17	+	+	+	0	0
14.15	1	1	+	+	0
12.13	4	2	+	+	0
10.11	9	5	1	1	0
8.9	9	8	4	1	+
6.7	8	10	7	1	+
4.5	6	9	5	1	+
43	1	4	2	1	0

3723

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	0	0	0
14.15	+	+	+	0	0
12.13	1	+	+	0	0
10.11	1	1	+	0	0
8.9	5	5	3	1	+
6.7	9	18	14	3	+
4.5	3	14	16	3	+
2.3	+	1	2	+	0
0.1	0	0	+	0	0
-2.-1	0	+	+	0	0
-4.-3	0	0	0	0	0

2259

WIND SPEED (KTS) 9

11-21	22-33	≥ 34
+	0	0
+	0	0
+	0	0
+	0	0
1	+	+
4	1	+
5	1	+
6	1	+
5	1	+
4	1	+
2	+	+

1896

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	0	+	+	0	0
12.13	+	1	+	+	0
10.11	+	1	1	+	0
8.9	1	3	4	1	+
6.7	2	15	17	3	+
4.5	3	15	21	4	+
2.3	+	3	4	1	0
0.1	+	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1797

WIND SPEED (KTS) 11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	+	0	0
14.15	+	+	+	0	0
12.13	+	1	+	+	0
10.11	+	2	1	+	0
8.9	2	6	6	1	+
6.7	3	18	17	5	+
4.5	2	11	14	5	1
2.3	+	1	1	+	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

4524

WIND SPEED (KTS) 12

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	+	+	+	0	0
14.15	0	+	+	0	0
12.13	+	1	+	+	0
10.11	1	4	3	+	+
8.9	2	11	12	2	+
6.7	4	18	22	6	1
4.5	1	4	6	2	+
2.3	0	+	+	+	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2750

WIND SPEED (KTS) 13

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	+	+	0	0	0
14.15	+	+	+	0	0
12.13	+	1	2	+	0
10.11	1	5	5	1	+
8.9	3	15	18	4	+
6.7	2	13	17	5	1
4.5	+	1	2	1	+
2.3	0	+	+	0	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2322

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	+	0	+	0	0
18.19	+	+	+	0	0
16.17	+	1	1	+	0
14.15	+	2	2	1	0
12.13	2	9	11	2	+
10.11	3	14	19	5	+
8.9	2	8	12	3	+
6.7	+	1	1	+	0
4.5	0	0	+	0	0
2.3	0	0	0	0	0

3040

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	0	+	0	+	0
24.25	+	+	1	0	0
22.23	1	5	4	+	0
20.21	1	10	7	1	0
18.19	3	15	11	1	+
16.17	3	11	6	2	+
14.15	2	5	2	1	0
12.13	1	2	1	+	0
10.11	+	1	+	+	0
49	+	+	+	+	0

1554

WIND SPEED (KTS) 19

11-21	22-33	≥ 34
+	0	0
+	0	0
1	0	0
4	1	+
12	2	+
26	3	+
4	2	+
1	0	0
0	0	0
0	0	0

1817

WIND SPEED (KTS) 20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	+	+	+	0	0
26.27	+	1	+	0	0
24.25	1	2	+	0	0
22.23	4	8	2	+	0
20.21	7	15	4	1	0
18.19	9	18	5	1	+
16.17	4	10	3	1	0
14.15	1	2	1	+	0
12.13	+	+	+	0	0
<11	+	+	+	0	0

5004

WIND SPEED (KTS) 21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	0	0	0
28.29	0	+	+	+	0
26.27	+	1	1	+	+
24.25	1	3	4	1	+
22.23	2	10	12	3	1
20.21	2	15	12	3	+
18.19	1	8	9	3	+
16.17	+	3	3	1	+
14.15	+	+	+	+	+
12.13	0	+	+	0	+
10.11	0	0	0	0	0

4263

WIND SPEED (KTS) 22

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	1	+	0	0
26.27	+	1	1	+	+
24.25	1	4	5	1	+
22.23	1	10	12	3	+
20.21	1	10	15	3	+
18.19	1	9	10	3	+
16.17	+	3	3	1	+
14.15	0	+	+	+	0
12.13	+	0	0	0	0
10.11	0	0	0	0	0

1970

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	+	+	0	0
24.25	+	1	1	+	0
22.23	1	4	5	1	+
20.21	2	8	11	2	+
18.19	2	13	17	3	+
16.17	1	6	10	2	+
14.15	+	2	3	1	+
12.13	+	1	+	+	+
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1747

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	0	+	+	0	0
24.25	+	1	1	+	0
22.23	1	4	3	1	+
20.21	1	8	9	2	+
18.19	2	12	15	3	+
16.17	1	11	12	2	+
14.15	+	2	3	1	+
12.13	+	+	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1499

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	+	0	0
26.27	0	1	+	0	0
24.25	+	1	1	+	0
22.23	1	7	5	1	0
20.21	2	11	11	1	0
18.19	2	12	15	1	+
16.17	1	9	8	1	+
14.15	+	2	3	1	+
12.13	0	+	1	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1691

WIND SPEED (KTS) 29

11-21	22-33	≥ 34
+	0	0
+	0	0
1	+	0
12	2	+
11	2	+
9	1	+
2	1	+
1	+	0
+	+	0
0	0	0

5033

WIND SPEED (KTS) 30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	+	1	+	0	0
28.29	1	4	1	0	0
26.27	3	9	6	+	0
24.25	3	16	12	+	0
22.23	3	16	12	1	+
20.21	1	4	3	+	0
18.19	+	1	1	+	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1996

WIND SPEED (KTS) 31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	+	0
30.31	+	1	1	0	0
28.29	1	5	8	+	0
26.27	2	15	28	1	0
24.25	2	11	18	1	0
22.23	+	1	2	+	0
20.21	0	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1982

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	+	0	0
28.29	+	1	1	+	0
26.27	1	4	8	1	0
24.25	1	10	25	3	+
22.23	1	10	28	3	0
20.21	+	1	2	+	0
18.19	0	+	+	0	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

5469

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	1	+	0
26.27	+	1	1	+	0
24.25	+	2	3	+	0
22.23	1	13	23	2	0
20.21	1	11	29	3	0
18.19	+	1	5	+	+
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2101

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	1	+	0
32.33	+	2	3	+	+
30.31	1	9	14	2	+
28.29	3	20	27	6	+
26.27	1	4	5	1	+
24.25	+	+	1	+	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

7398

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	+	0	0	0
36.37	+	+	+	0	0
34.35	+	+	+	0	0
32.33	1	2	2	+	0
30.31	3	13	9	1	+
28.29	5	23	19	3	+
26.27	1	6	7	2	+
24.25	+	1	1	+	+
22.23	+	+	+	0	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0

7606

WIND SPEED (KTS) 39

11-21	22-33	≥ 34
+	0	0
3	0	0
7	+	0
58	2	+
10	+	+
+	0	0
0	0	0
0	0	0
0	0	0
0	0	0

2277

WIND SPEED (KTS) 40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	1	2	0	0
30.31	0	4	5	+	0
28.29	1	16	21	+	0
26.27	1	14	30	+	0
24.25	0	2	2	0	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

647

WIND SPEED (KTS) 41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	0	+	0	0
28.29	0	2	4	1	0
26.27	1	9	50	5	+
24.25	+	7	17	2	+
22.23	0	+	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

367

WIND SPEED (KTS) 42

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	+	+	0	0
26.27	+	1	1	0	0
24.25	1	4	5	+	0
22.23	1	18	24	1	0
20.21	1	15	19	1	0
18.19	+	3	4	0	0
16.17	0	+	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

914

WIND SPEED (KTS) 43

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	+	0	0
30.31	1	1	1	0	0
28.29	3	13	5	+	0
26.27	5	25	12	1	+
24.25	2	14	9	+	0
22.23	+	4	2	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

897

WIND SPEED (KTS) 44

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	0	+	0	0
36.37	+	0	+	0	0
34.35	+	+	+	0	0
32.33	1	2	1	+	0
30.31	3	11	4	+	0
28.29	10	36	12	1	0
26.27	1	9	5	+	+
24.25	+	1	1	+	+
22.23	0	+	0	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0

5517

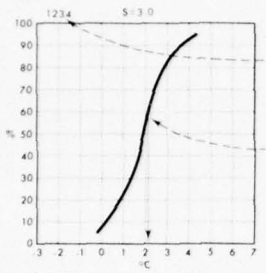
WIND SPEED (KTS) 45

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	+	1	+	0	0
30.31	3	2	0	0	0
28.29	22	33	5	+	0
26.27	8	18	3	0	0
24.25	0	2	+	0	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

472

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE



Sea surface temperature.

Number of observations.

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

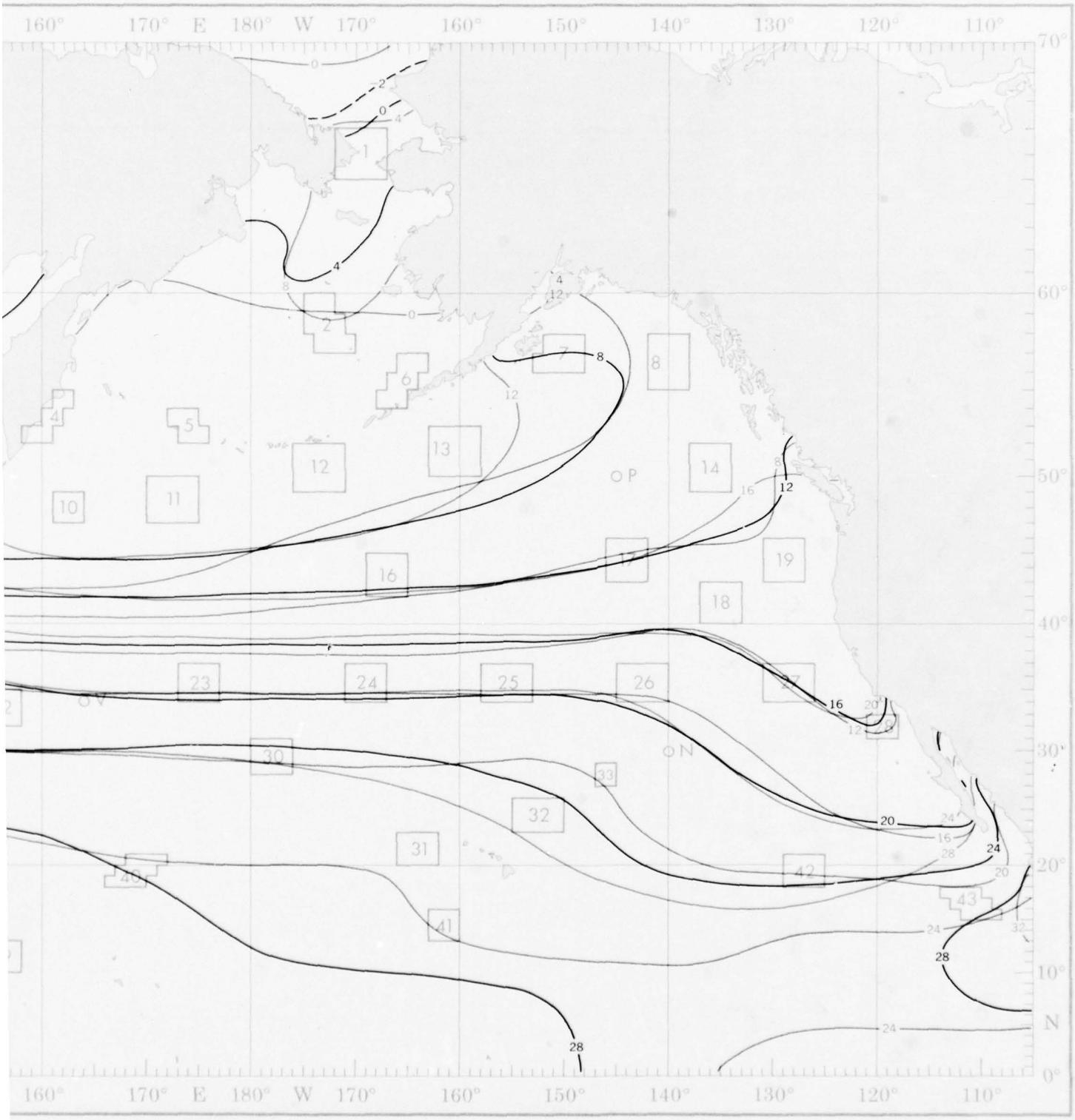
S = Standard deviation of sea surface temperatures (°C).

BLACK LINE – Mean sea surface temperature (°C)

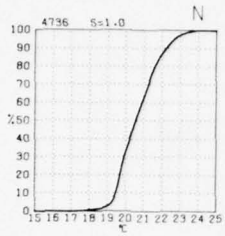
BLUE LINE – Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

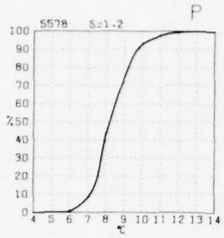
RED LINE – Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

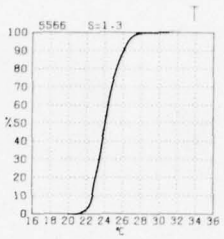
SEA SURFACE TEMPERATURE

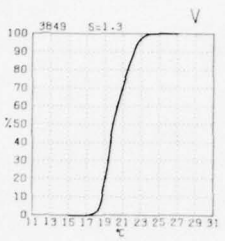


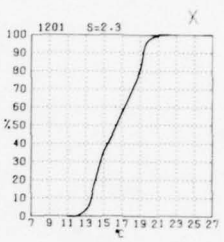
SEA SURFACE TEMPERATURE

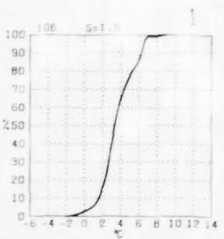


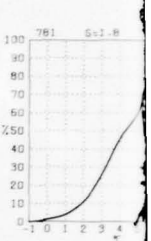


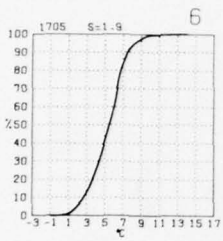


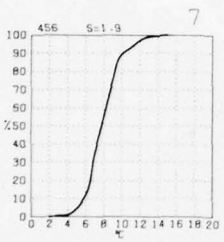


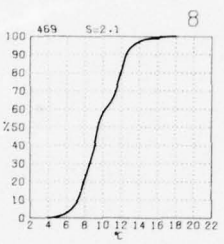


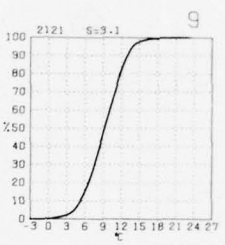


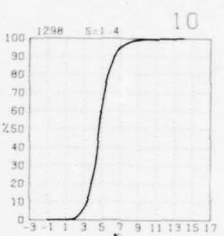


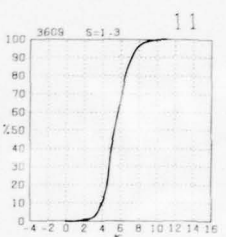


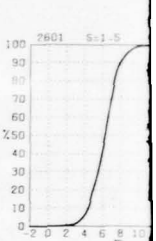


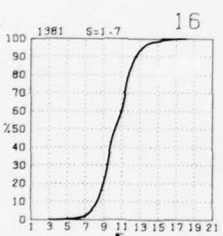


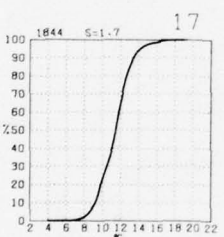


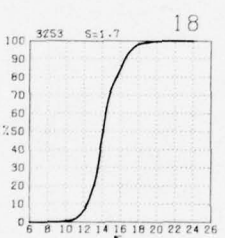


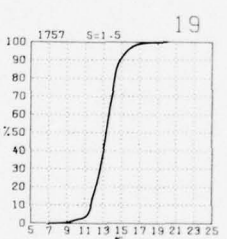


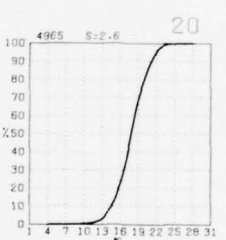


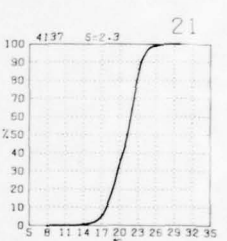


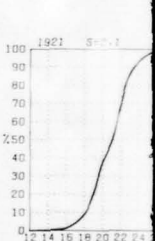


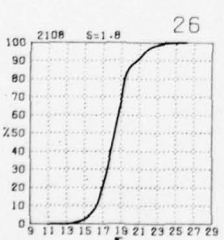


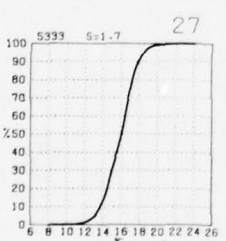


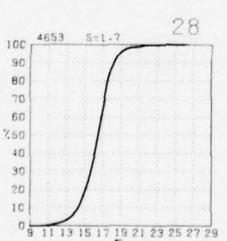


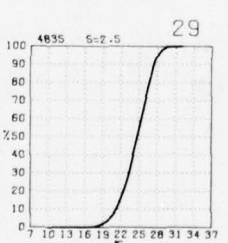


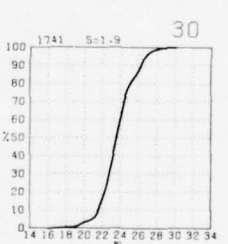


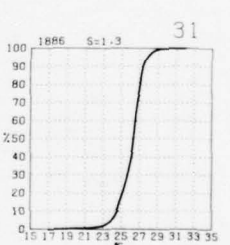


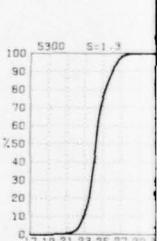


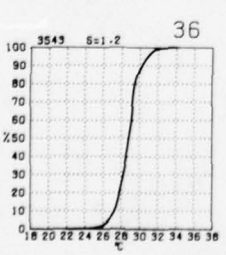


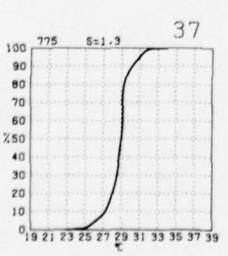


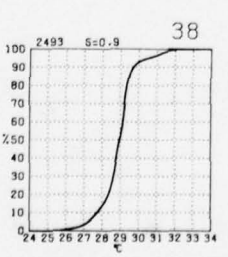


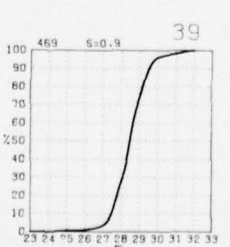


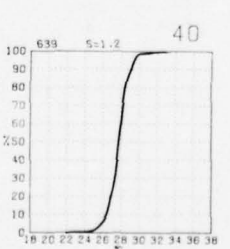


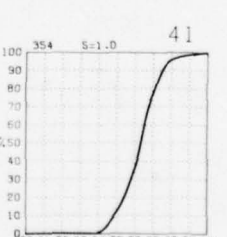


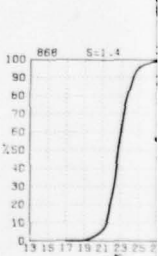






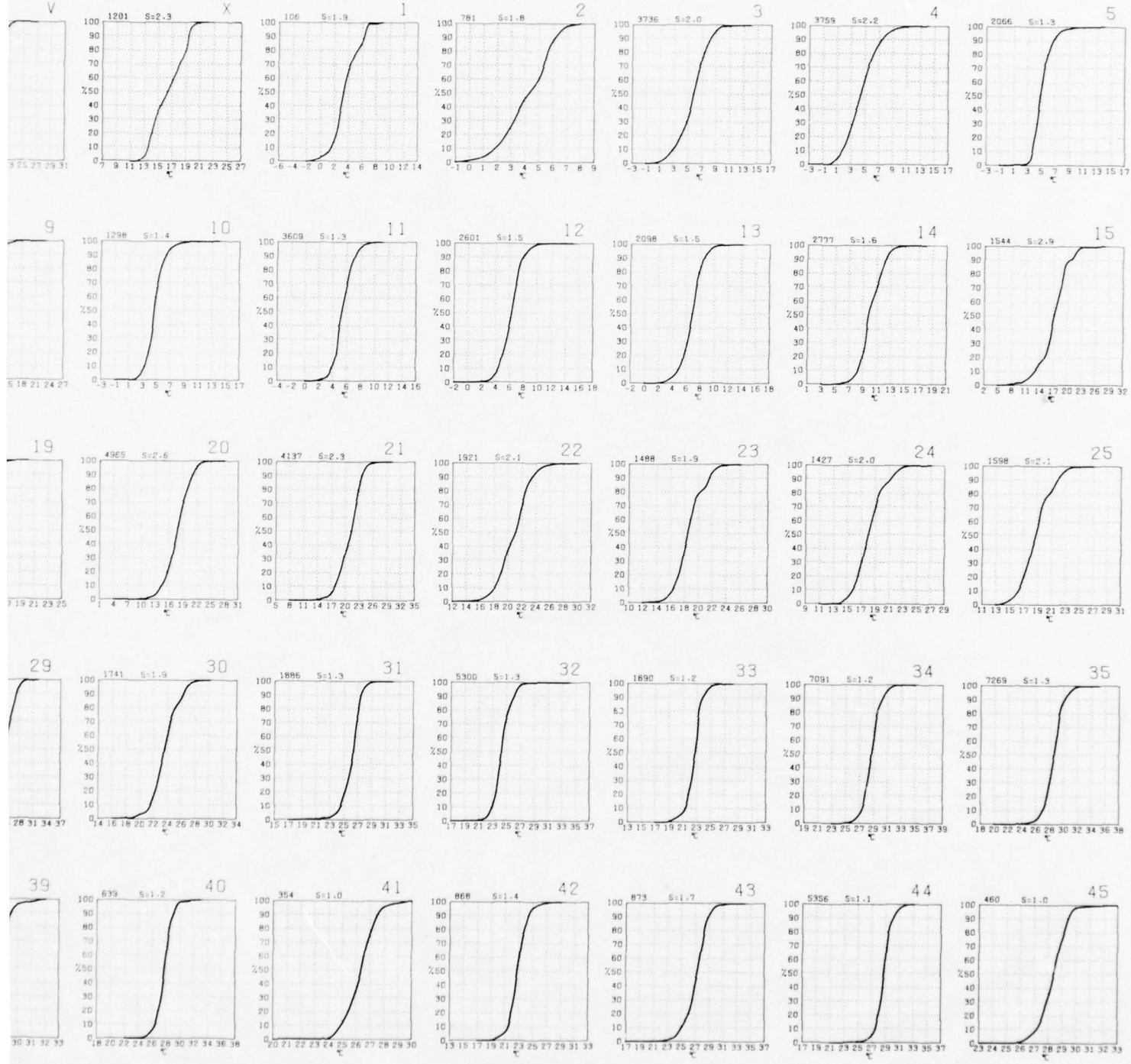






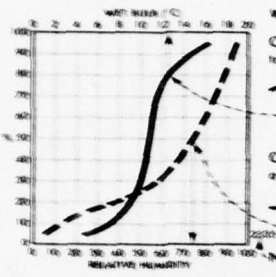
Graphs represent the objective compilation of available data for specified areas without regard to s
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JUNE



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Wet bulb - Relative humidity

Cumulative percent frequency of wet bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

(80% of all observed wet bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

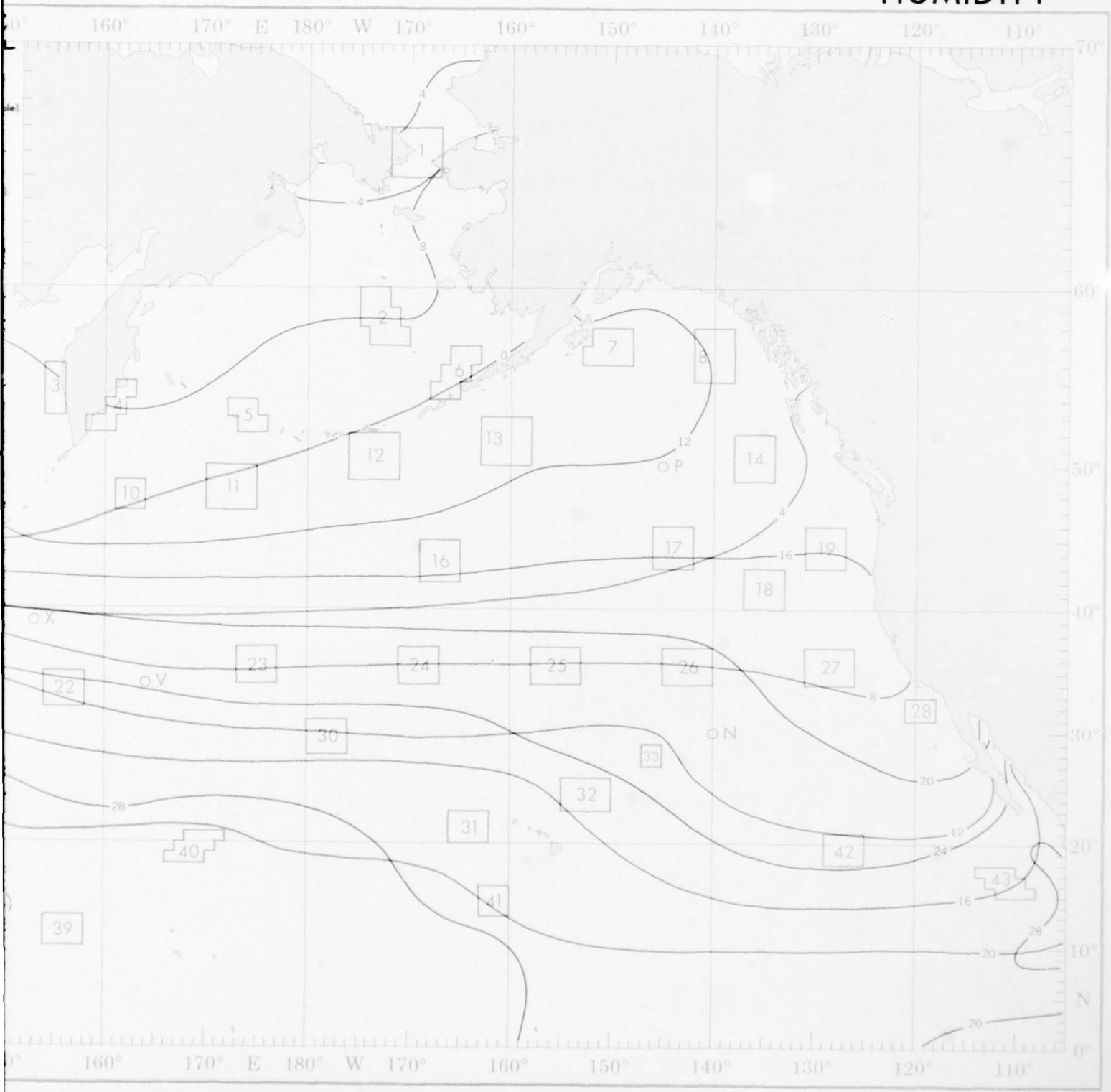
(50% of all observed relative humidities were ≤74%.)

Number of observations.

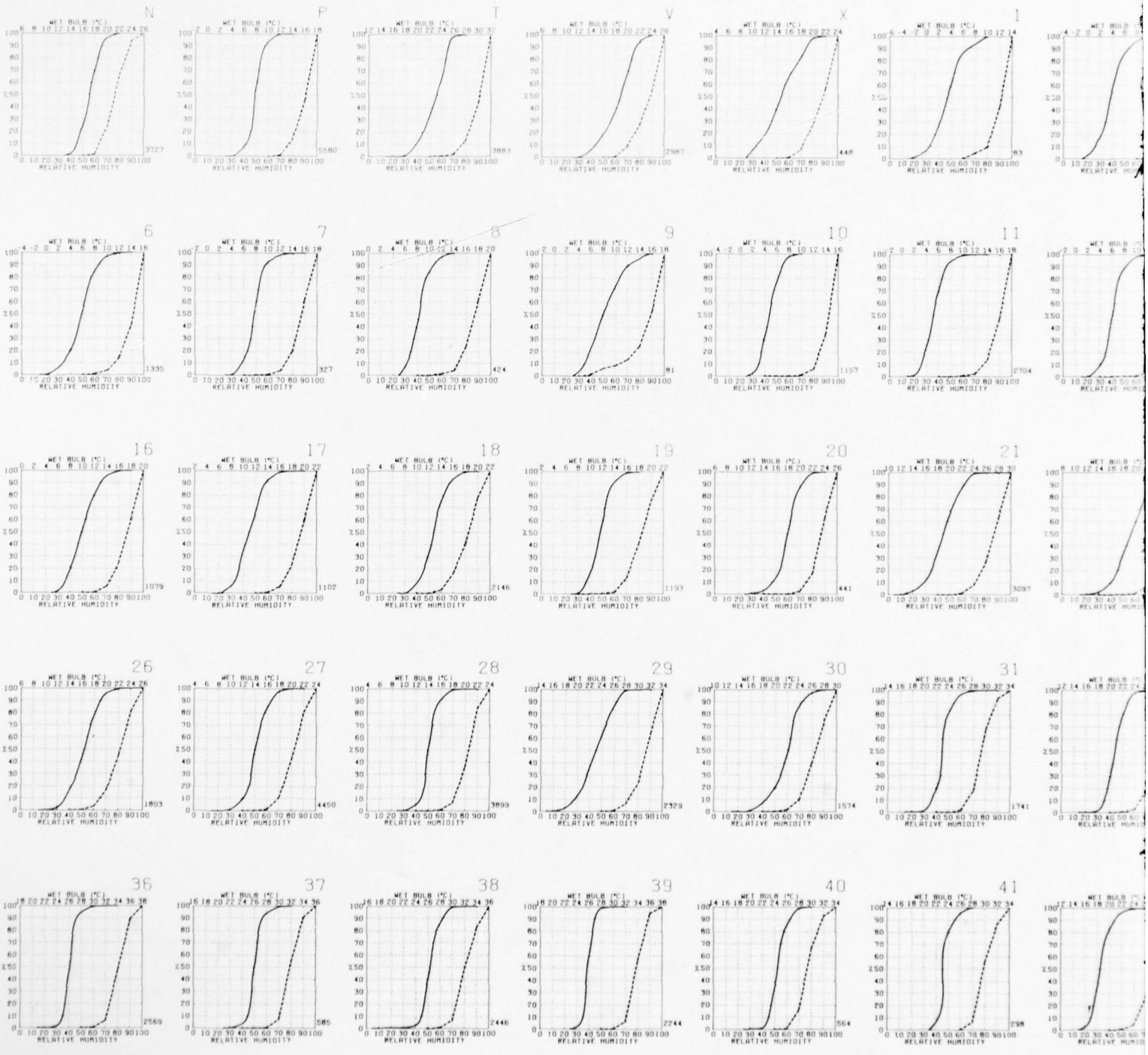
BLUE LINE — Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

RED LINE — Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

HUMIDITY


160°
170° E
180° W
170°
160°
150°
140°
130°
120°
110°
70°
60°
50°
40°
30°
20°
10°
0°
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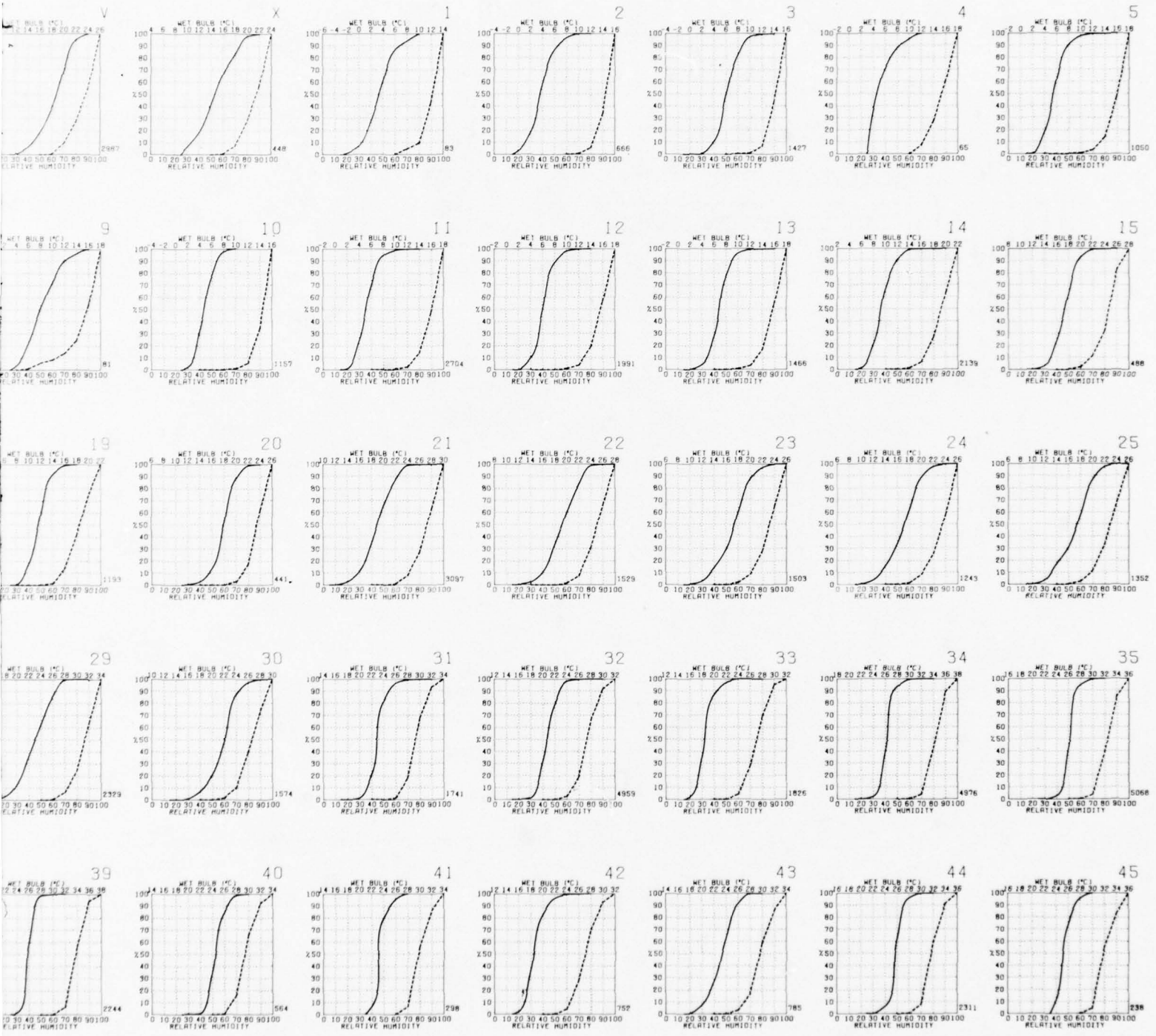
WET BULB AND RELATIVE HUMIDITY



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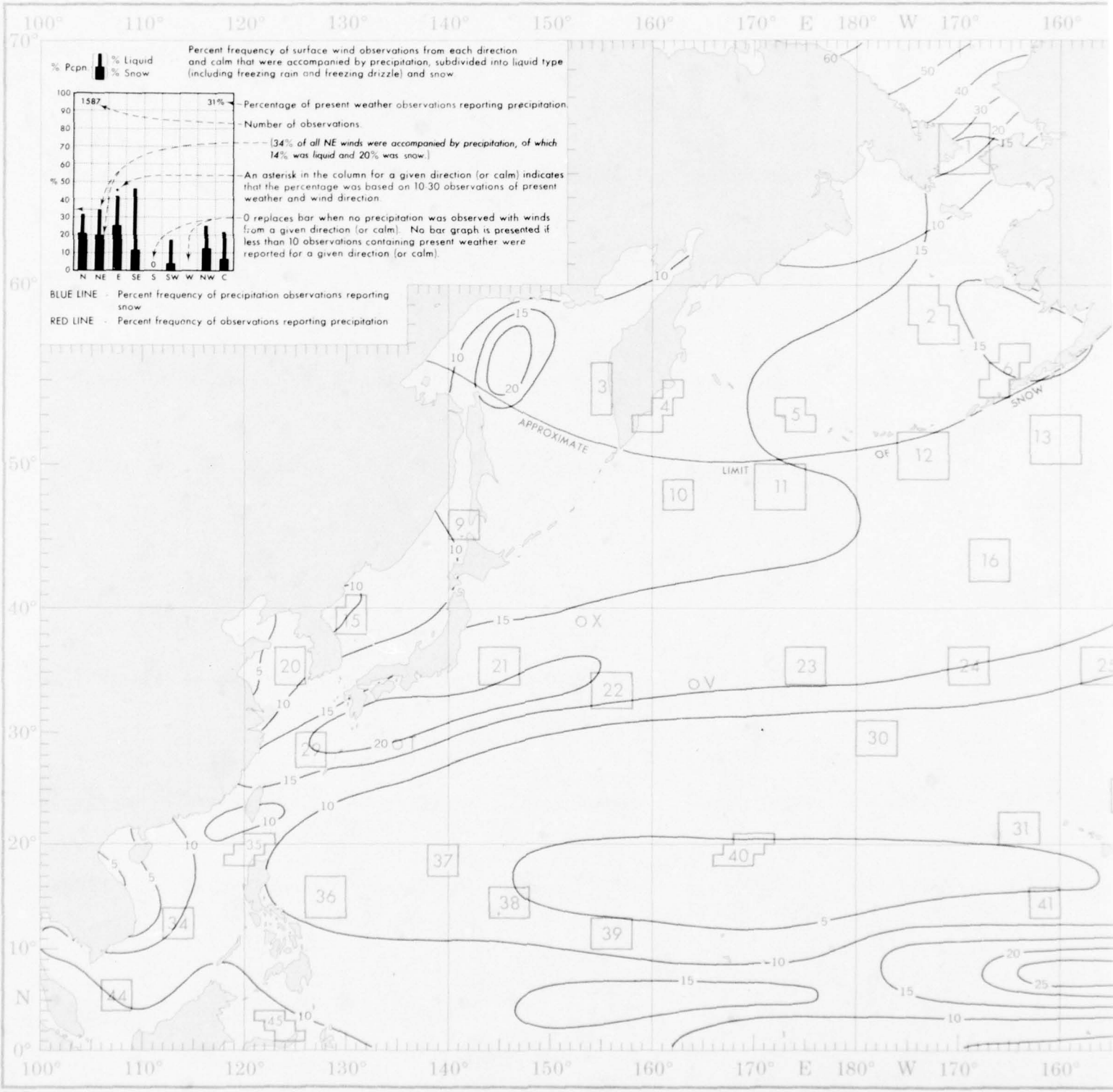
HUMIDITY

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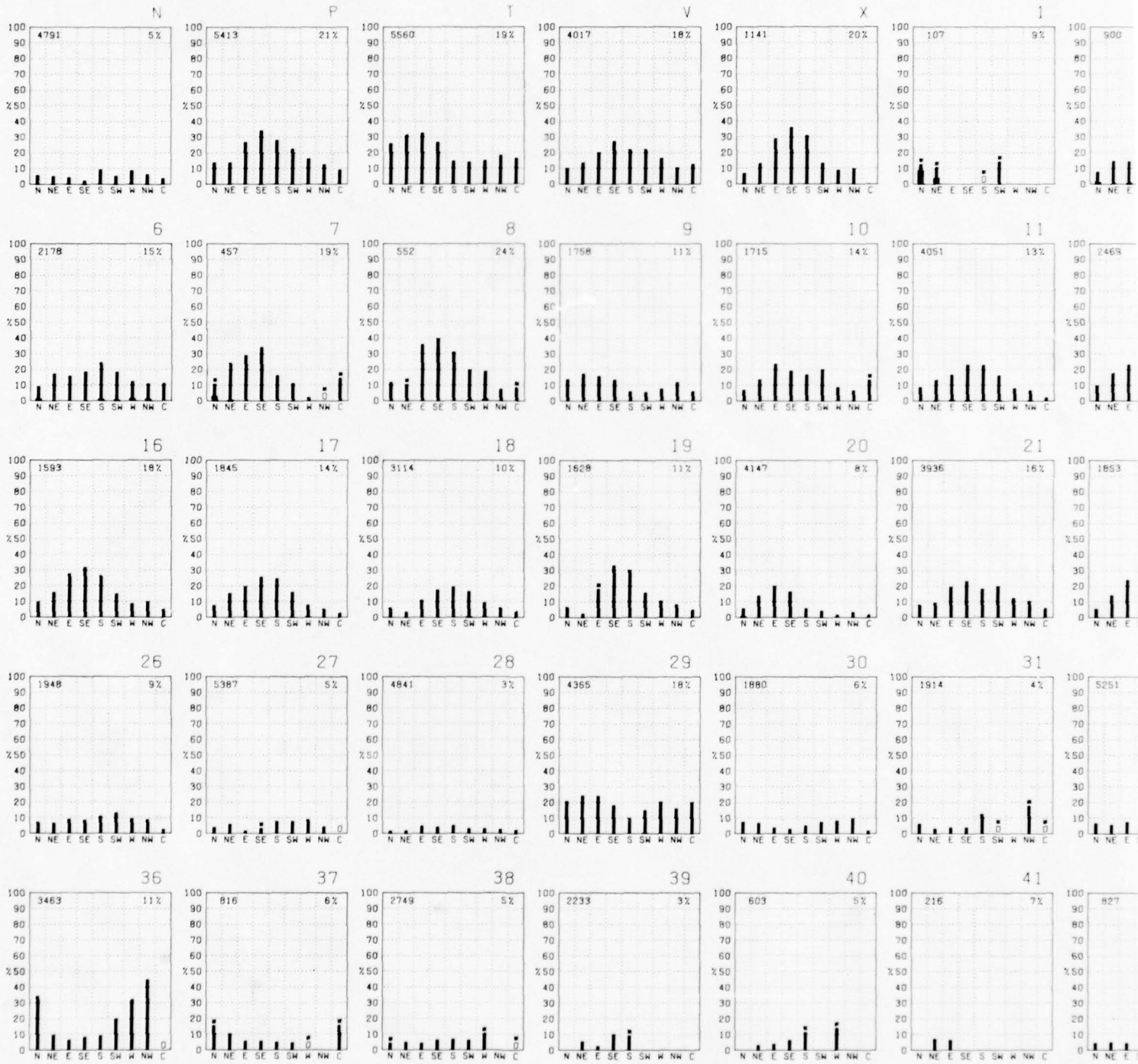
JUNE


% Pcpn
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE LIMIT OF SNOW
OX
OV

PRECIPITATION

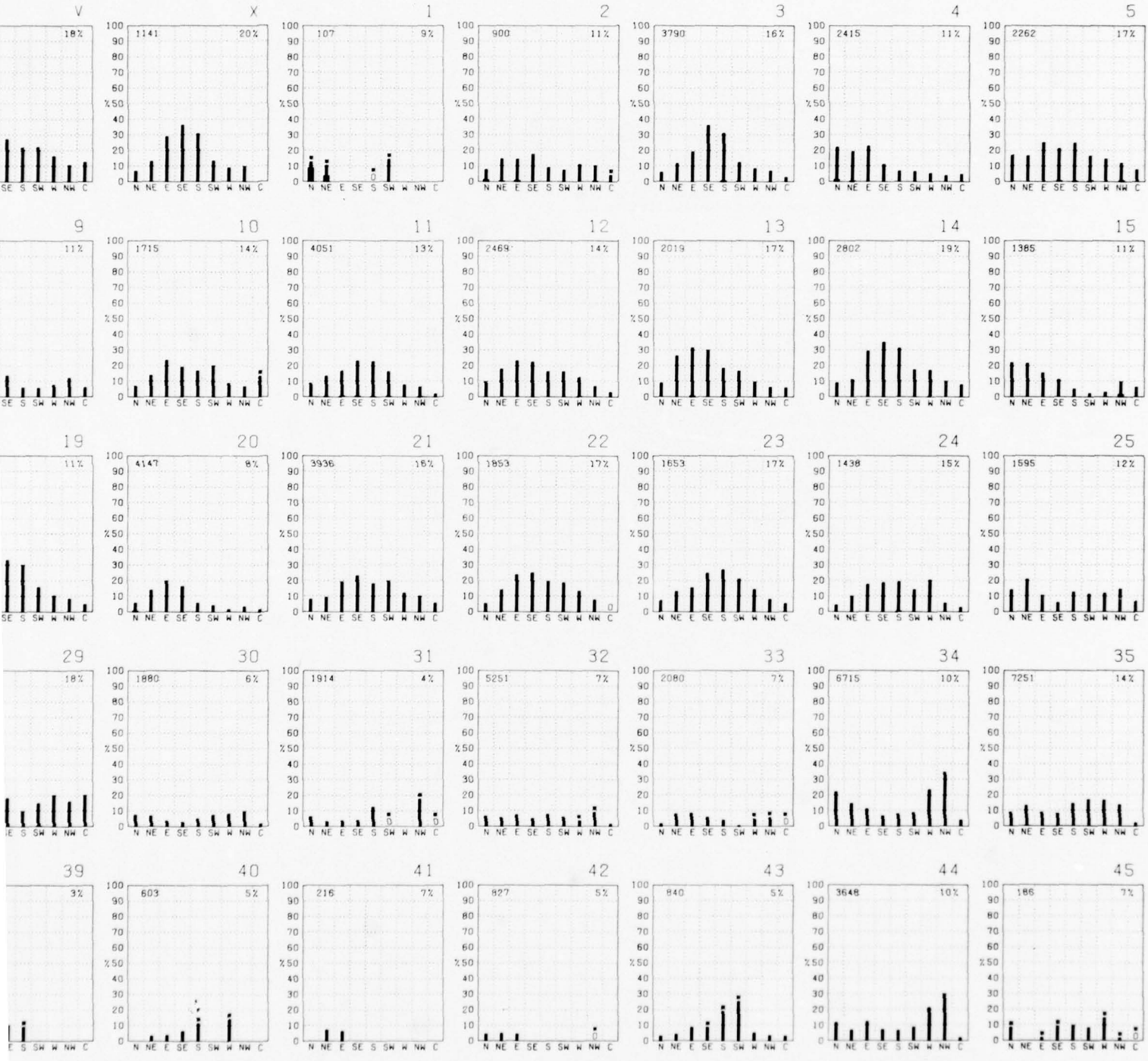


PRECIPITATION



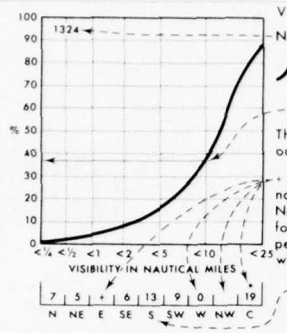
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Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of *all visibilities reported were <10 nautical miles.*)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

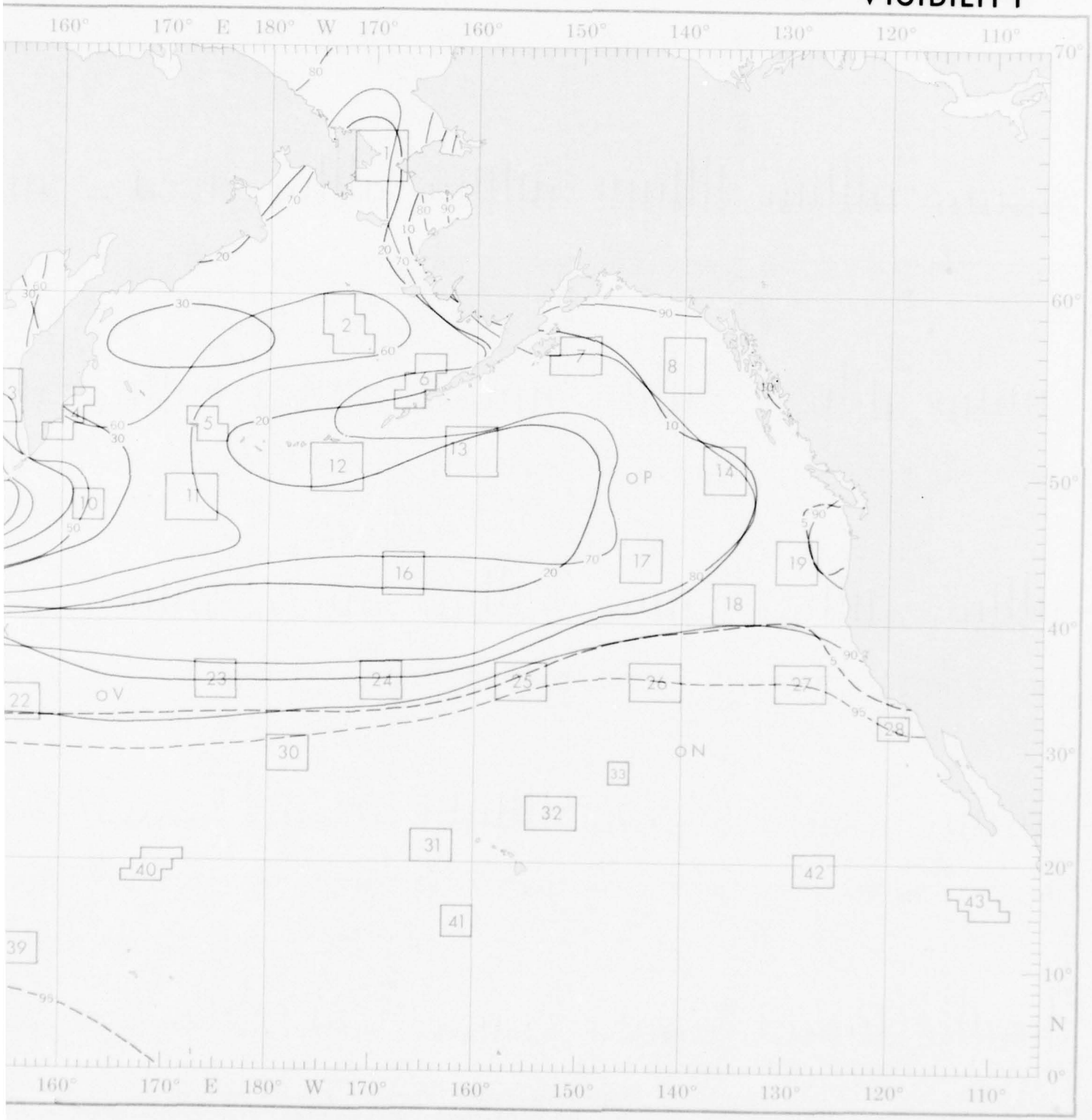
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of *all S winds were accompanied by visibilities <2 nautical miles.*)

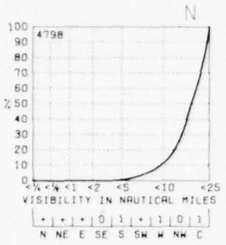
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

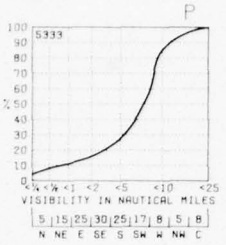
RED LINE - Percent frequency of visibilities <2 nautical miles

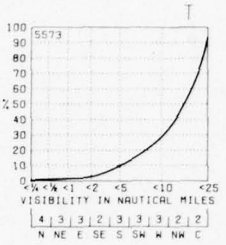
VISIBILITY

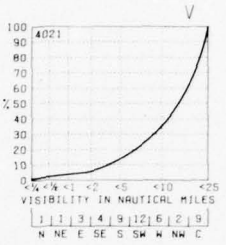

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
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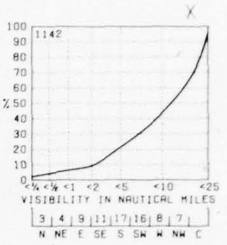
VISIBILITY

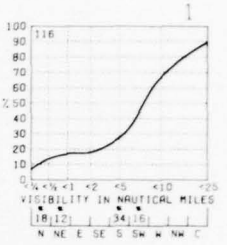


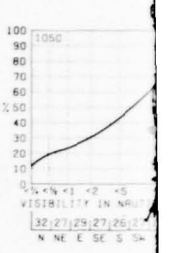


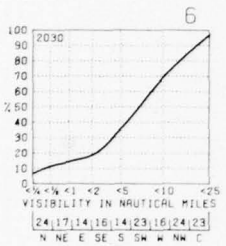


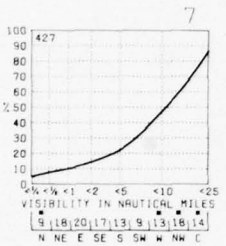


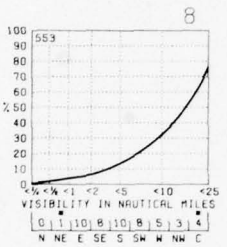


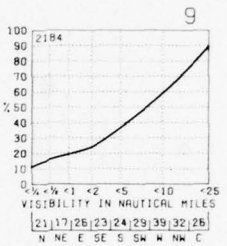


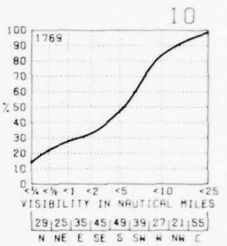


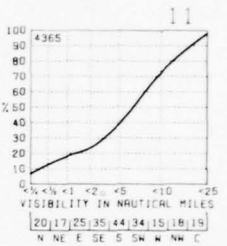


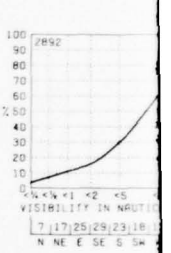


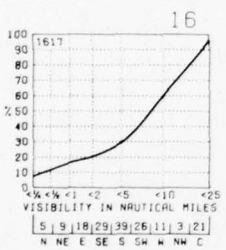


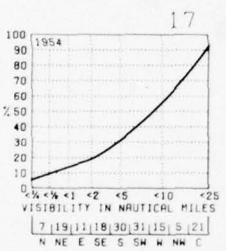


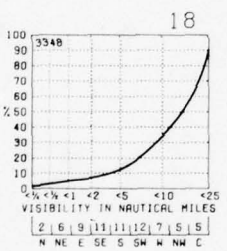


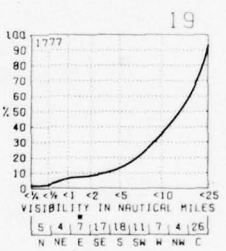


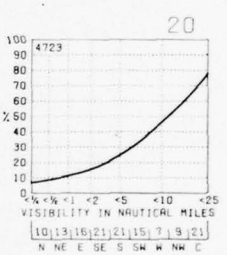


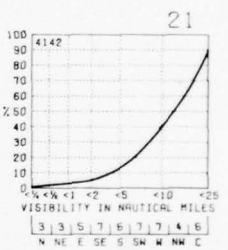


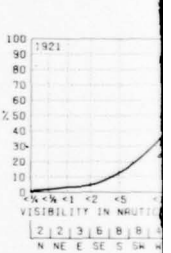


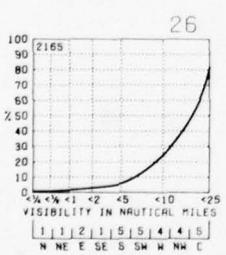


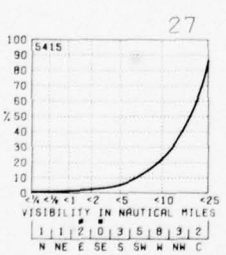


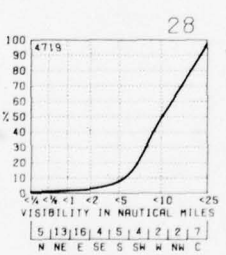


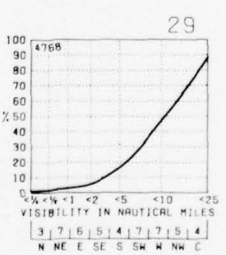


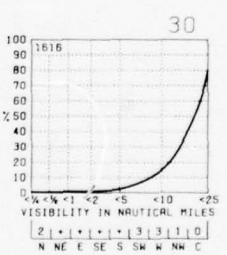


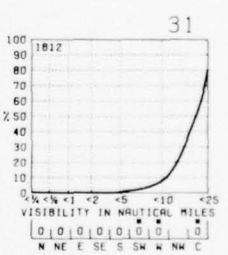


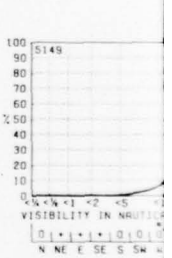


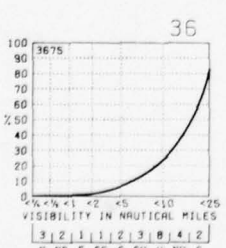


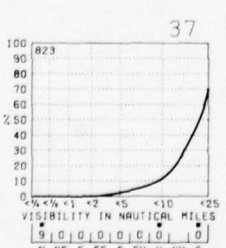


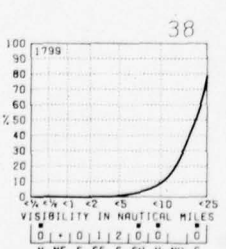


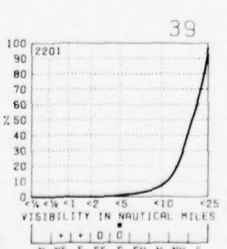


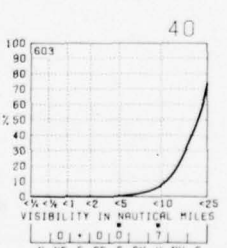


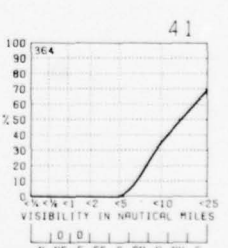


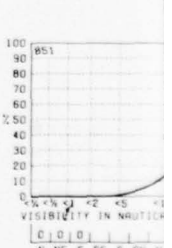






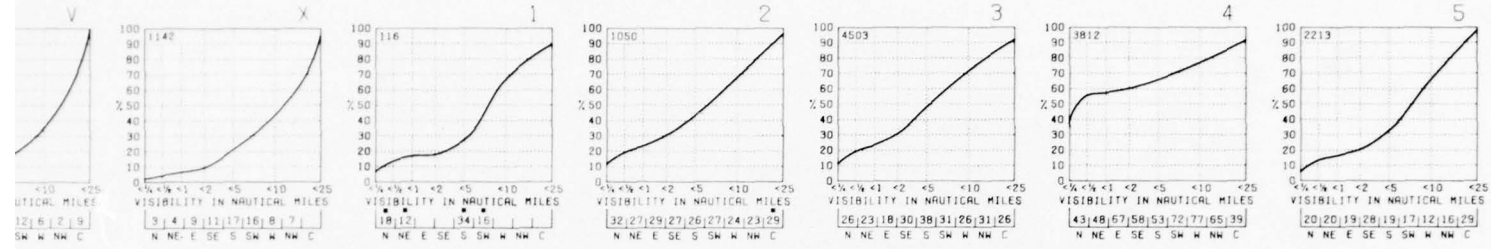


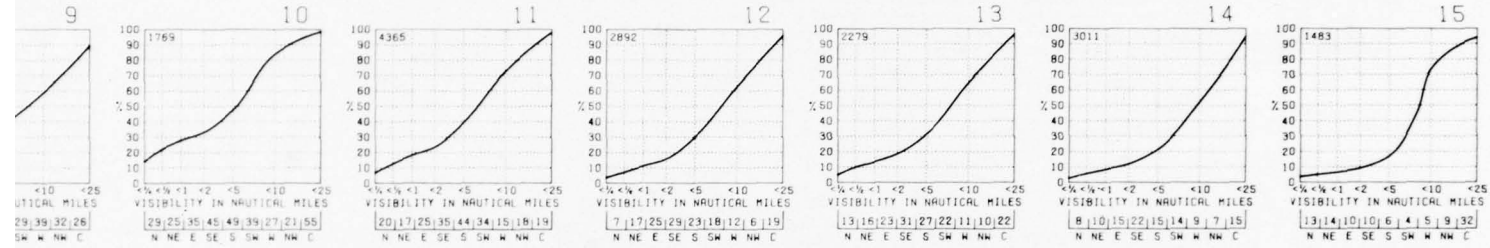


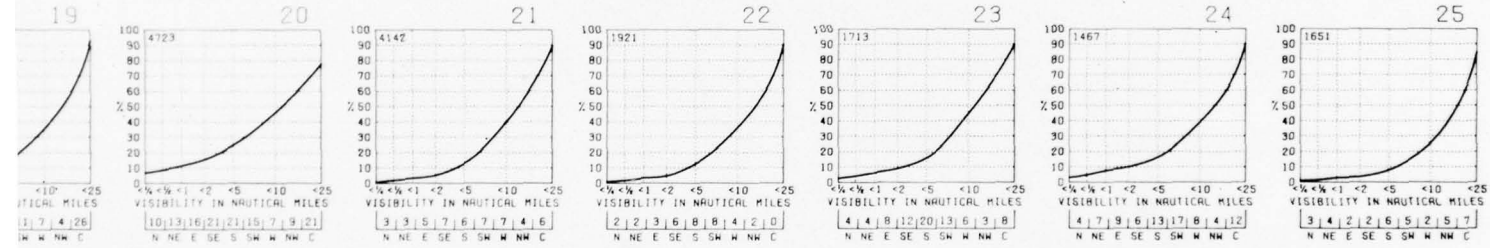


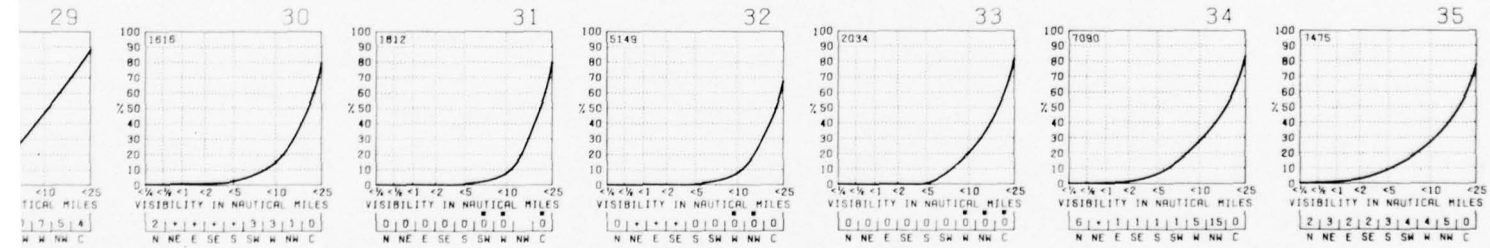
Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

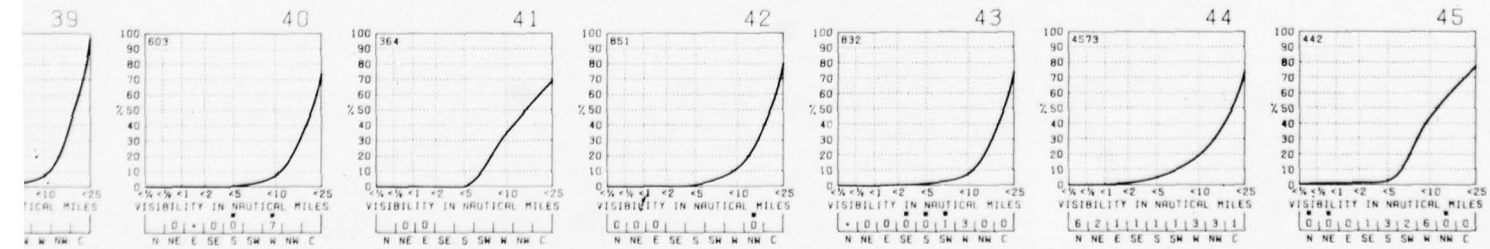
JUNE





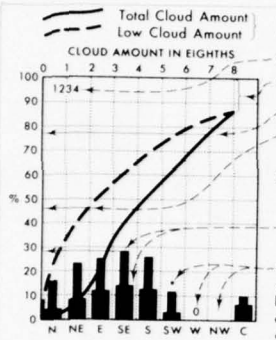






jective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE



Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 — ≥5/8 & ≥7/8

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

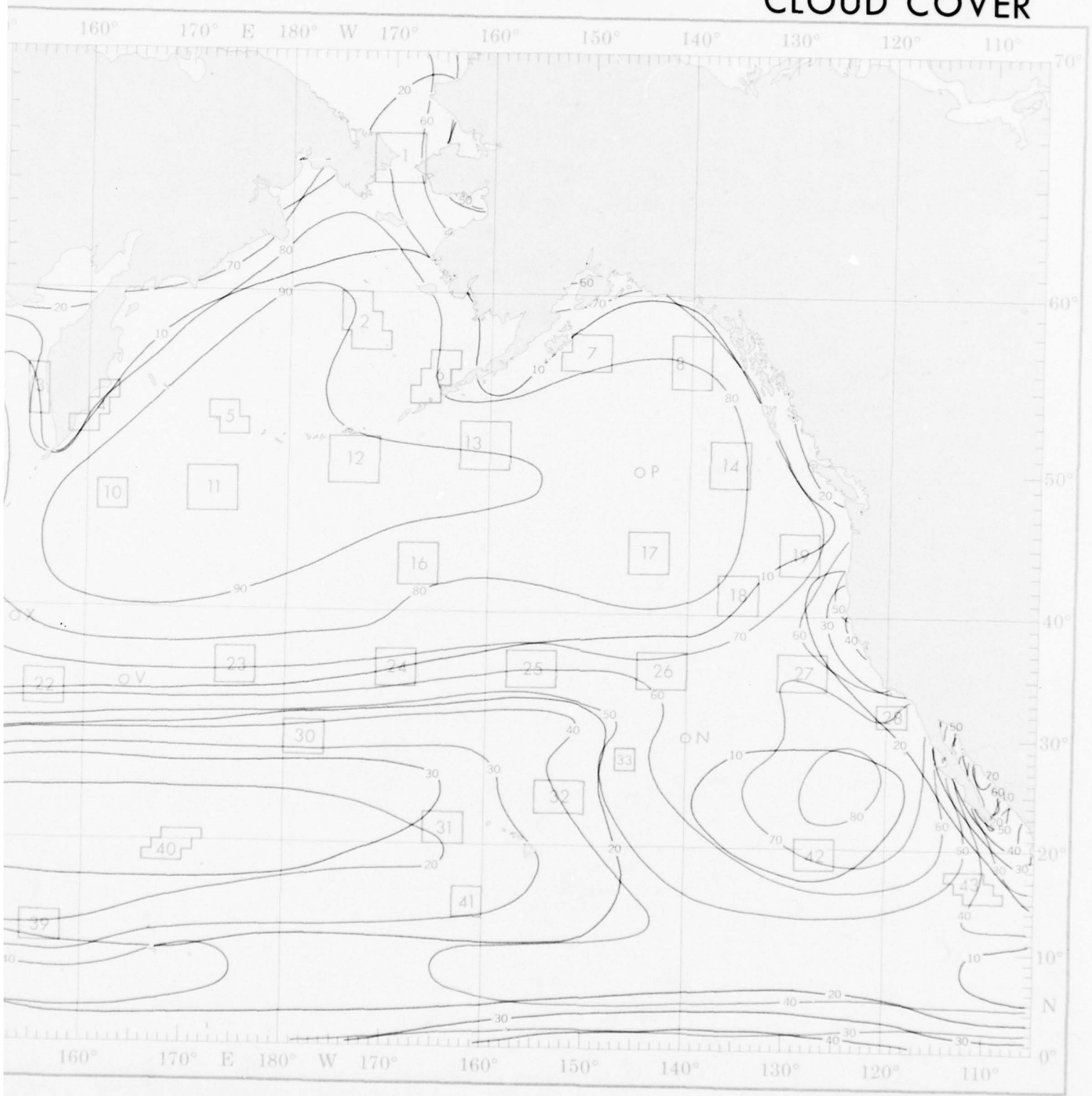
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

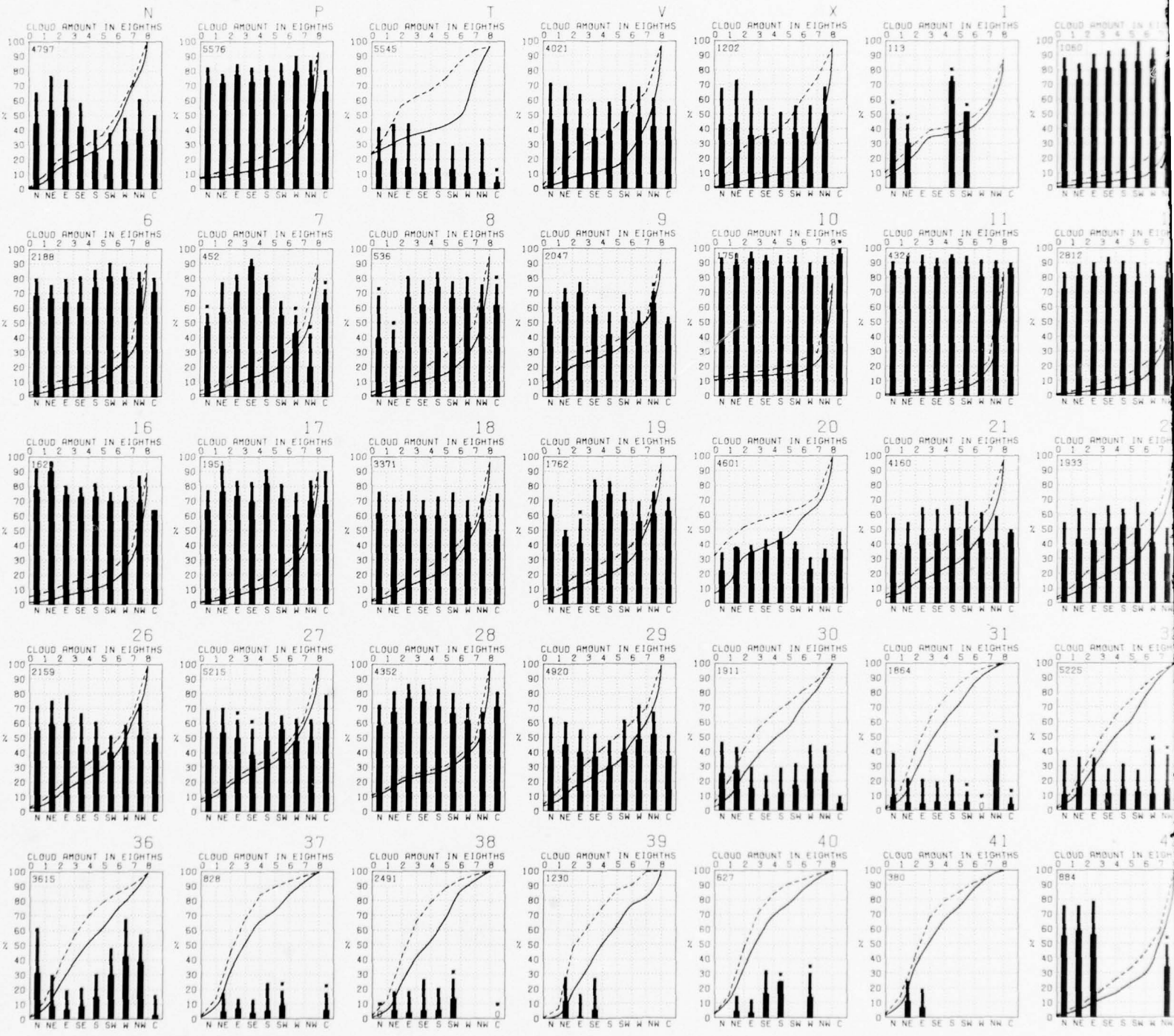
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

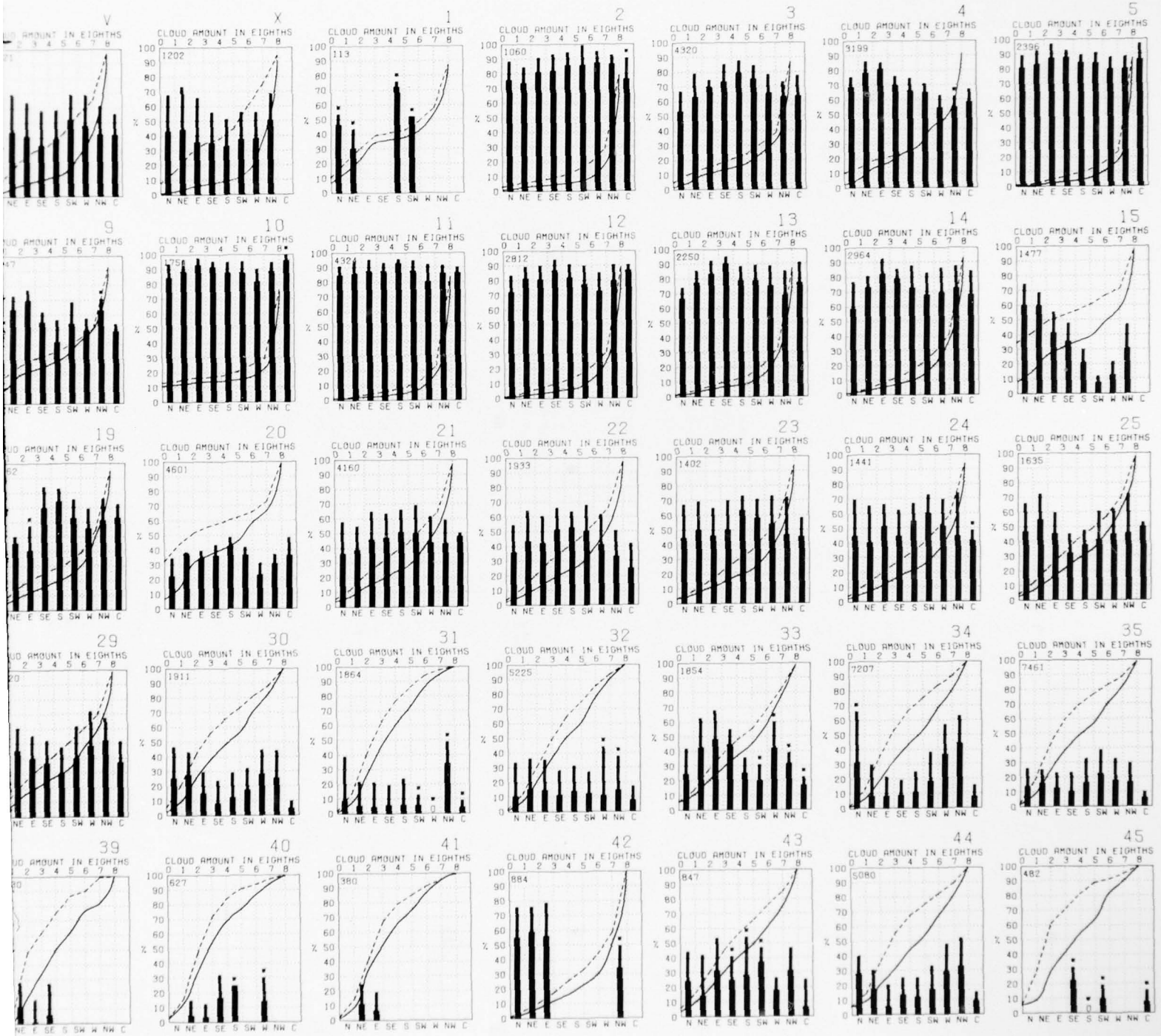

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
OP
OX
OV
ON
1
2
3
4
5
6
7
8
10
11
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43

CLOUD COVER



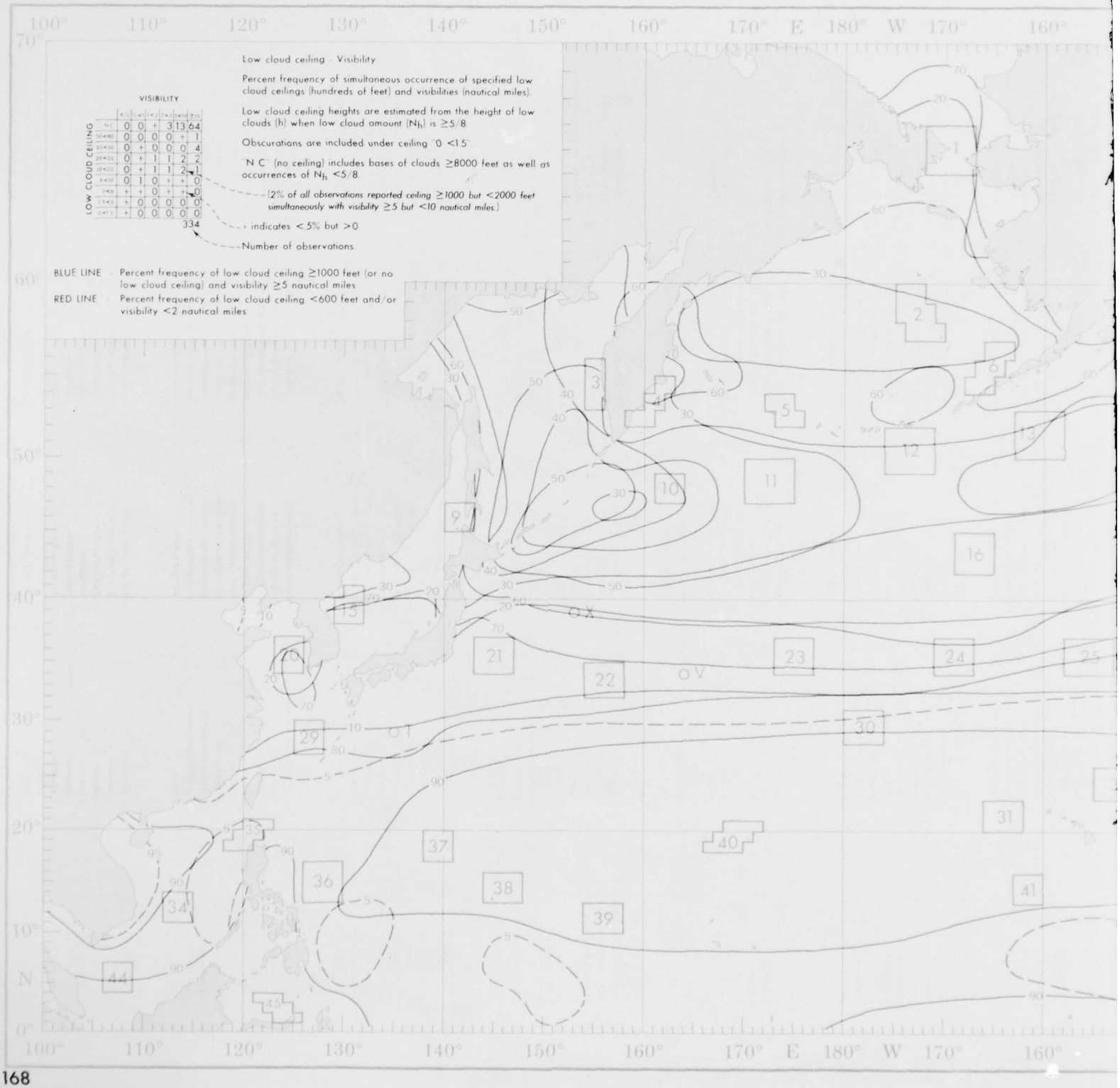
Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

JUNE

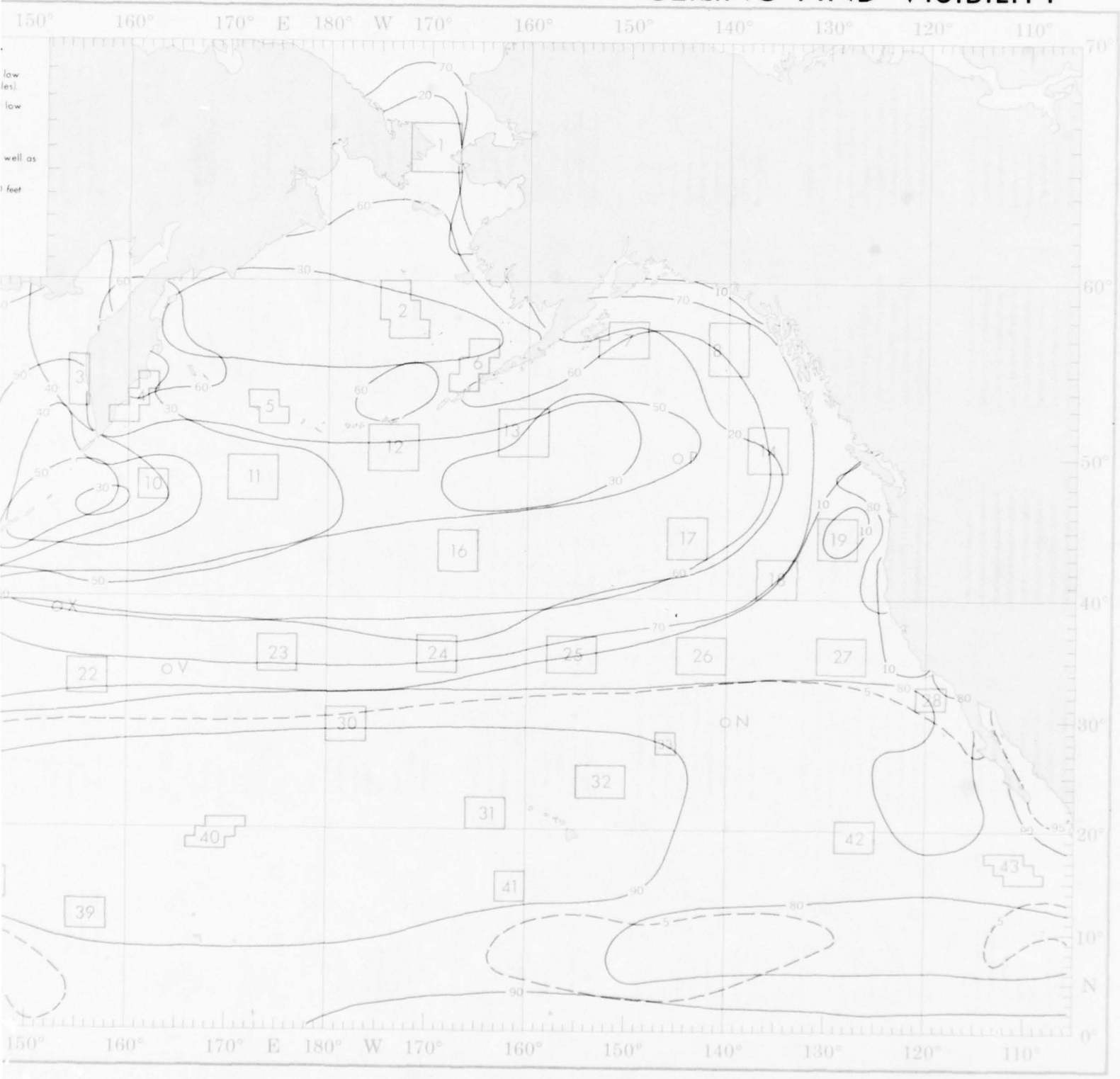


nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE


Low cloud ceiling - Visibility
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0.
334
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles.
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles.

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	29
50-80	0	0	0	0	*	*
35-50	0	0	0	0	1	6
20-35	0	0	*	*	5	45
10-20	0	0	*	*	3	8
6-10	0	0	*	*	*	*
3-6	0	0	*	*	*	*
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

4795

P

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	1	11	4
50-80	0	0	0	0	*	*
35-50	*	*	0	*	1	1
20-35	*	*	*	*	15	4
10-20	*	*	1	4	23	5
6-10	*	1	1	4	4	1
3-6	1	1	2	3	2	*
1.5-3	*	*	*	*	*	0
0-1.5	6	*	*	*	0	0

5319

T

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	1	9	57
50-80	0	0	0	*	*	*
35-50	0	0	0	*	*	2
20-35	0	0	*	*	1	4
10-20	*	*	1	5	8	8
6-10	*	*	*	1	1	1
3-6	*	*	*	*	*	*
1.5-3	0	0	0	0	0	0
0-1.5	1	*	0	0	0	0

3766

V

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	1	6	29
50-80	0	0	*	*	*	1
35-50	0	0	*	*	*	2
20-35	0	*	*	1	4	19
10-20	*	*	*	3	7	12
6-10	*	*	1	2	3	2
3-6	*	*	1	1	1	*
1.5-3	*	*	*	*	*	*
0-1.5	2	1	1	*	*	0

4020

X

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	2	8	27
50-80	*	0	0	0	*	1
35-50	0	0	0	*	1	3
20-35	0	0	*	*	5	14
10-20	0	0	1	5	7	10
6-10	*	1	1	3	2	1
3-6	*	*	1	1	*	*
1.5-3	0	0	0	0	0	0
0-1.5	4	1	0	*	*	0

1140

1

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	2	0	1	2	18	19
50-80	1	0	0	0	0	2
35-50	0	0	0	0	1	2
20-35	1	0	0	1	5	4
10-20	0	0	0	3	9	7
6-10	0	0	0	3	4	0
3-6	1	0	0	1	2	0
1.5-3	0	0	0	0	1	0
0-1.5	9	3	0	1	1	0

111

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2
NC	1	*	*
50-80	0	0	0
35-50	0	0	*
20-35	0	0	*
10-20	*	*	1
6-10	*	*	1
3-6	*	1	*
1.5-3	1	1	*
0-1.5	17	2	3

6

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	*	1	4	12
50-80	0	0	0	*	1	1
35-50	0	0	*	1	2	1
20-35	*	*	6	8	5
10-20	1	1	1	6	11	8
6-10	1	*	1	3	4	3
3-6	*	*	*	1	1	1
1.5-3	*	*	*	*	*	*
0-1.5	10	1	1	1	*	*

1757

7

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	*	2	23
50-80	*	*	0	0	0	2
35-50	0	*	0	0	2	2
20-35	0	0	*	2	5	7
10-20	*	0	1	1	5	12
6-10	0	0	*	3	6	7
3-6	0	0	1	2	3	1
1.5-3	*	0	*	0	1	*
0-1.5	7	2	2	1	1	*

392

8

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	1	20
50-80	0	0	0	*	0	1
35-50	0	0	0	0	1	3
20-35	0	0	0	*	3	9
10-20	*	*	*	*	4	21
6-10	*	*	*	1	5	11
3-6	0	*	*	1	2	3
1.5-3	0	0	*	1	2	1
0-1.5	2	1	*	1	1	1

430

9

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	1	*	*	2	6	25
50-80	0	0	*	*	1	2
35-50	0	0	0	*	2	3
20-35	*	*	*	2	6	11
10-20	*	*	1	4	5	4
6-10	0	*	*	1	1	1
3-6	*	0	*	*	1	0
1.5-3	0	0	*	*	*	*
0-1.5	12	1	1	2	1	*

881

10

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	*	3	4
50-80	0	0	0	0	*	*
35-50	0	*	*	*	1	1
20-35	*	0	*	1	7	3
10-20	*	*	1	5	15	5
6-10	1	*	1	4	7	2
3-6	1	1	1	3	3	*
1.5-3	*	*	*	*	*	*
0-1.5	20	3	2	1	1	*

1518

11

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	*	2	5
50-80	0	0	0	*	*	*
35-50	0	0	*	*	1	1
20-35	*	*	*	3	6	6
10-20	*	1	2	5	13	11
6-10	1	*	1	3	8	4
3-6	*	*	*	1	2	1
1.5-3	*	*	*	*	*	*
0-1.5	12	3	2	1	1	*

3280

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2
NC	*	*	0
50-80	0	0	0
35-50	0	0	0
20-35	*	*	*
10-20	*	*	1
6-10	*	*	1
3-6	*	*	*
1.5-3	0	0	*
0-1.5	6	2	2

16

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	*	4	14
50-80	*	0	0	*	1	1
35-50	*	0	*	*	1	1
20-35	*	*	1	6	7
10-20	*	*	1	3	11	8
6-10	*	1	1	3	5	5
3-6	2	1	1	1	1	1
1.5-3	*	*	*	*	*	*
0-1.5	9	2	1	1	*	0

1344

17

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	2	15
50-80	0	0	0	0	*	1
35-50	*	0	*	*	1	3
20-35	*	0	*	1	4	8
10-20	*	*	*	4	8	15
6-10	*	*	1	2	5	6
3-6	*	0	*	1	2	2
1.5-3	0	*	0	*	*	*
0-1.5	8	2	2	1	1	*

1223

18

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	*	0	*	2	26
50-80	0	0	0	*	*	1
35-50	0	0	*	0	1	4
20-35	0	0	0	*	3	17
10-20	*	0	*	1	7	18
6-10	*	*	*	1	3	6
3-6	*	*	*	*	1	1
1.5-3	0	0	*	*	0	*
0-1.5	3	1	1	1	1	*

2344

19

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	1	*	1	2	24
50-80	0	0	0	0	*	1
35-50	0	0	0	*	*	2
20-35	0	*	0	1	5	17
10-20	*	0	*	1	5	18
6-10	0	0	*	1	3	7
3-6	*	0	*	1	1	1
1.5-3	*	0	0	*	*	*
0-1.5	2	2	1	*	1	*

1478

20

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	1	1	21	40
50-80	0	0	0	0	*	1
35-50	0	0	0	0	*	2
20-35	*	0	0	*	3	4
10-20	*	0	1	2	3	4
6-10	0	*	*	1	2	1
3-6	0	0	0	*	1	*
1.5-3	*	0	0	*	0	0
0-1.5	6	1	*	1	*	0

444

21

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	1	5	32
50-80	0	0	0	*	*	1
35-50	0	0	0	0	*	2
20-35	0	*	*	1	3	7
10-20	*	*	*	2	8	14
6-10	*	*	*	2	6	6
3-6	*	*	*	1	1	1
1.5-3	*	*	*	*	1	*
0-1.5	1	*	*	*	1	*

3053

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2
NC	0	*	*
50-80	0	0	0
35-50	0	0	0
20-35	0	0	0
10-20	0	*	*
6-10	0	*	*
3-6	*	*	*
1.5-3	0	0	*
0-1.5	1	1	*

26

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	1	2	31
50-80	0	0	0	*	*	1
35-50	0	0	0	0	*	4
20-35	0	0	0	*	2	10
10-20	*	0	*	1	3	21
6-10	*	0	*	1	3	13
3-6	0	0	0	*	1	3
1.5-3	*	*	0	*	*	*
0-1.5	*	*	1	*	1	*

1631

27

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	*	*	3	30
50-80	0	*	0	*	*	1
35-50	0	0	0	*	*	3
20-35	0	0	*	*	2	13
10-20	0	0	*	*	5	21
6-10	*	*	*	1	4	9
3-6	0	*	*	*	1	2
1.5-3	0	*	*	*	*	*
0-1.5	1	*	*	1	*	*

4119

28

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	*	10	18
50-80	0	0	0	0	*	1
35-50	0	0	0	*	*	1
20-35	0	0	0	*	5	8
10-20	0	*	*	1	16	18
6-10	0	0	*	1	8	5
3-6	*	*	*	1	2	1
1.5-3	0	*	*	*	*	*
0-1.5	1	*	*	*	*	*

3794

29

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	*	*	2	9	32
50-80	0	0	0	0	*	1
35-50	0	0	0	0	1	1
20-35	*	*	*	1	4	6
10-20	*	*	*	3	10	10
6-10	*	*	1	3	5	4
3-6	*	*	*	1	2	1
1.5-3	*	*	0	*	*	*
0-1.5	1	*	*	1	*	*

2743

30

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	*	*	*	5	63
50-80	0	0	0	0	*	1
35-50	0	*	0	*	*	2
20-35	*	0	0	*	1	8
10-20	*	0	0	1	2	8
6-10	0	0	*	*	1	5
3-6	0	*	0	*	*	1
1.5-3	0	0	*	*	*	*
0-1.5	*	0	*	*	*	*

1191

31

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	5	73
50-80	0	0	0	0	0	*
35-50	0	0	0	0	*	1
20-35	0	0	0	0	1	6
10-20	0	0	0	*	*	7
6-10	0	0	0	*	*	4
3-6	0	0	0	0	*	*
1.5-3	0	0	0	0	0	*
0-1.5	0	0	0	0	0	*

1433

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2
NC	0	0	0
50-80	0	0	0
35-50	0	0	0
20-35	0	0	0
10-20	0	0	*
6-10	0	0	*
3-6	0	0	0
1.5-3	0	0	0
0-1.5	0	*	*

36

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	2	10	60
50-80	0	0	0	0	*	*
35-50	0	0	0	*	*	3
20-35	*	0	0	*	1	3
10-20	0	0	*	1	4	7
6-10	*	0	*	2	3	3
3-6	*	0	*	1	1	1
1.5-3	0	0	0	*	*	*
0-1.5	*	*	*	*	*	*

2887

37

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	1	4	80
50-80	0	0	0	0	0	0
35-50	0	0	0	0	*	1
20-35	0	0	0	*	1	2
10-20	0	0	0	*	1	4
6-10	0	0	0	*	2	3
3-6	*	0	0	*	*	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	*	0	*

563

38

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	*	6	74
50-80	0	0	0	0	0	0
35-50	0	0	0	0	*	1
20-35	0	0	0	0	*	4
10-20	0	0	0	*	2	7
6-10	0	0	0	*	2	3
3-6	0	0	0	0	*	1
1.5-3	0	0	0	0	0	0
0-1.5	0	*	0	0	0	*

1053

39

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	*	1	86
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	1
20-35	0	0	0	0	*	*
10-20	0	0	0	*	1	7
6-10	0	0	0	0	*	2
3-6	0	0	0	*	0	*
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	*	0

631

40

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	*	0	0	0	5	78
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	2
20-35	0	0	0	0	*	4
10-20	0	0	0	*	1	5
6-10	0	0	0	0	1	3
3-6	0	0	0	0	*	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	*	0

512

41

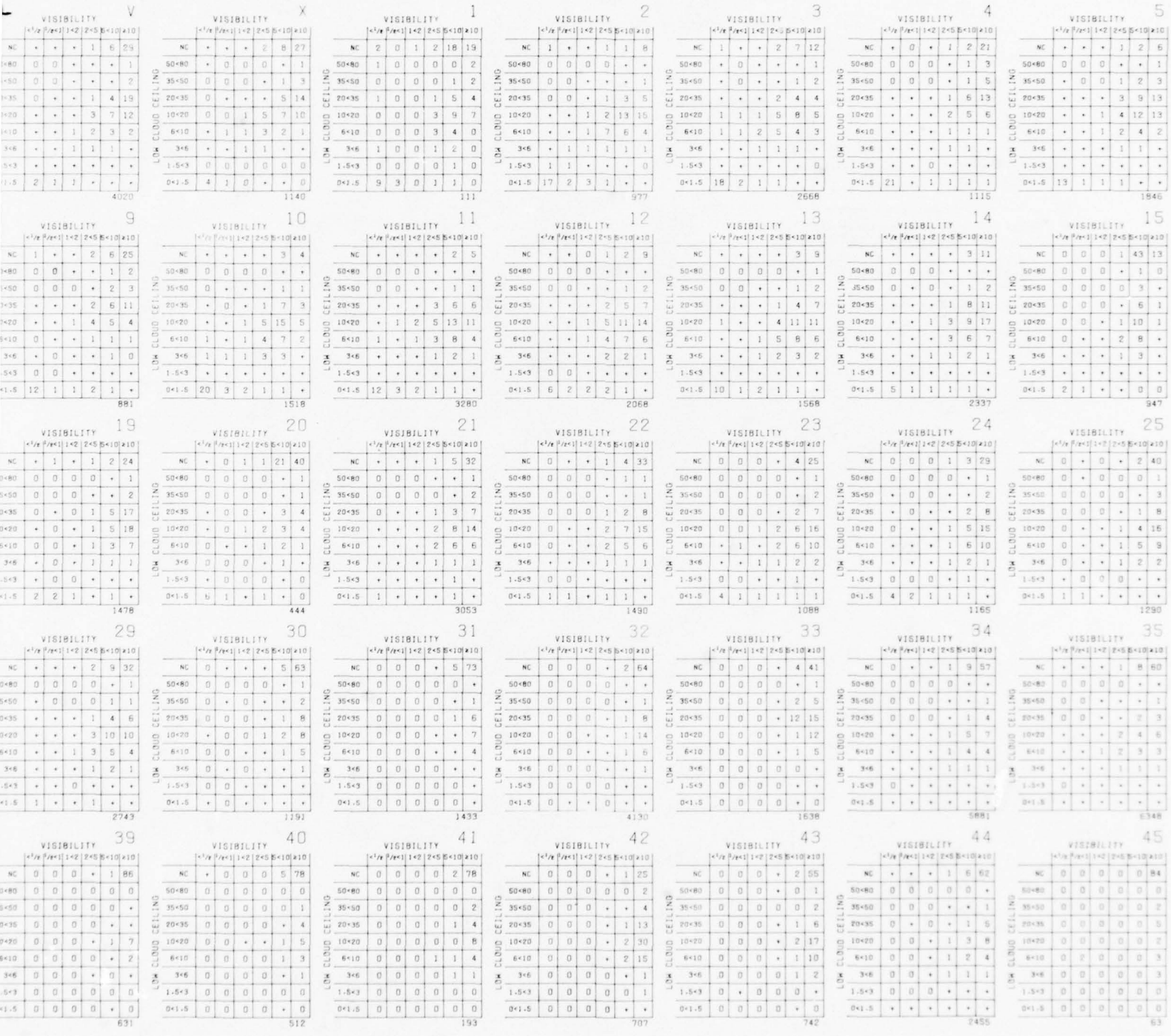
CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2	2-<5	5-<10	≥10
NC	0	0	0	0	2	78
50-80	0	0	0	0	0	0
35-50	0	0	0	0	0	0
20-35	0	0	0	0	1	4
10-20	0	0	0	0	0	8
6-10	0	0	0	0	1	1
3-6	0	0	0	0	1	1
1.5-3	0	0	0	0	0	0
0-1.5	0	0	0	0	0	0

193

CLOUD CEILING	VISIBILITY <¼	¼-<½	½-<1	1-<2
NC	0	0	0
50-80	0	0	0
35-50	0	0	0
20-35	0	0	0
10-20	0	0	0
6-10	0	0	0
3-6	0	0	0
1.5-3	0	0	0
0-1.5	0	0	0

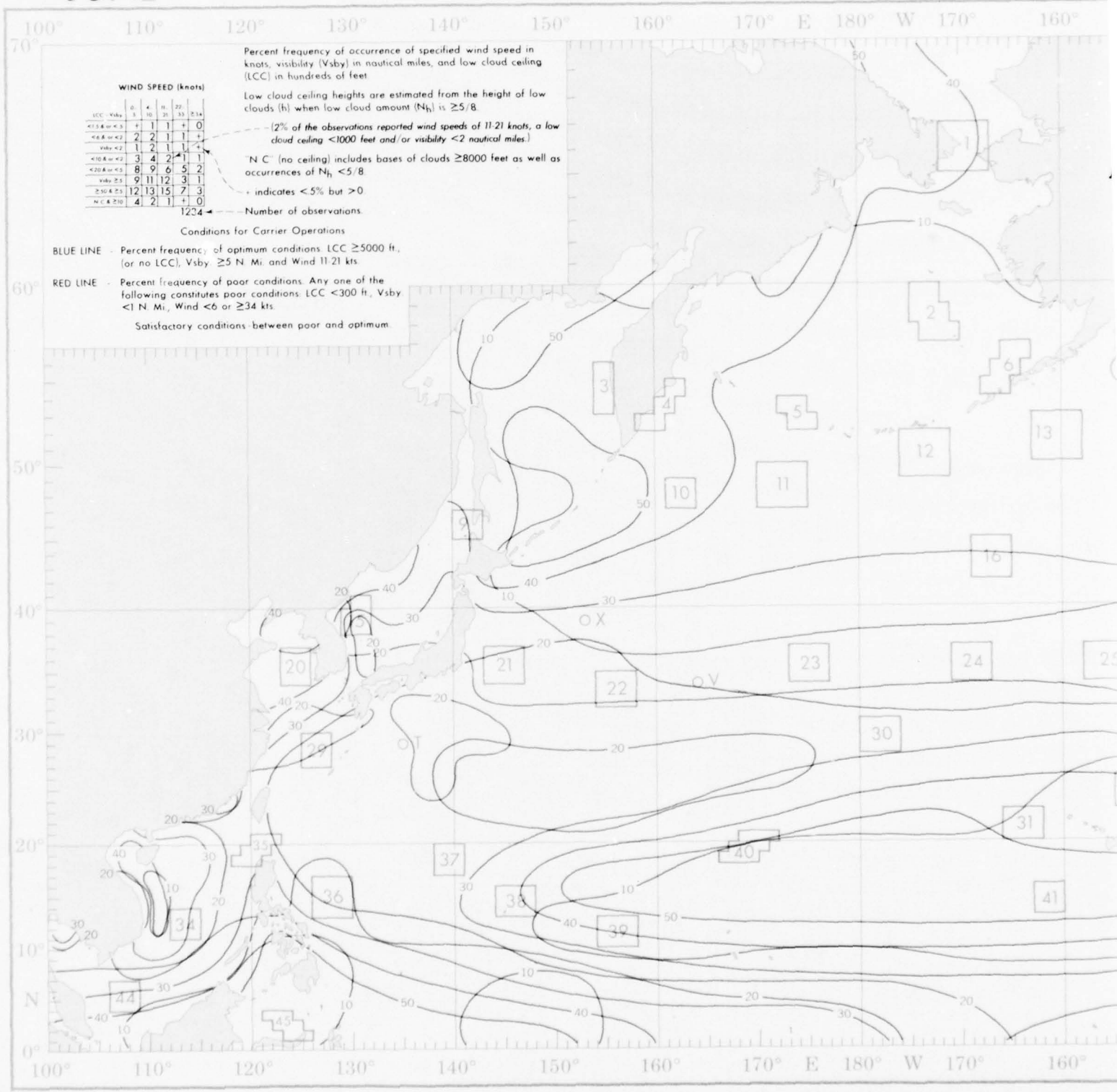
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

JUNE



esent the objective compilation of available data for specified areas without regard to suspected biases.
analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

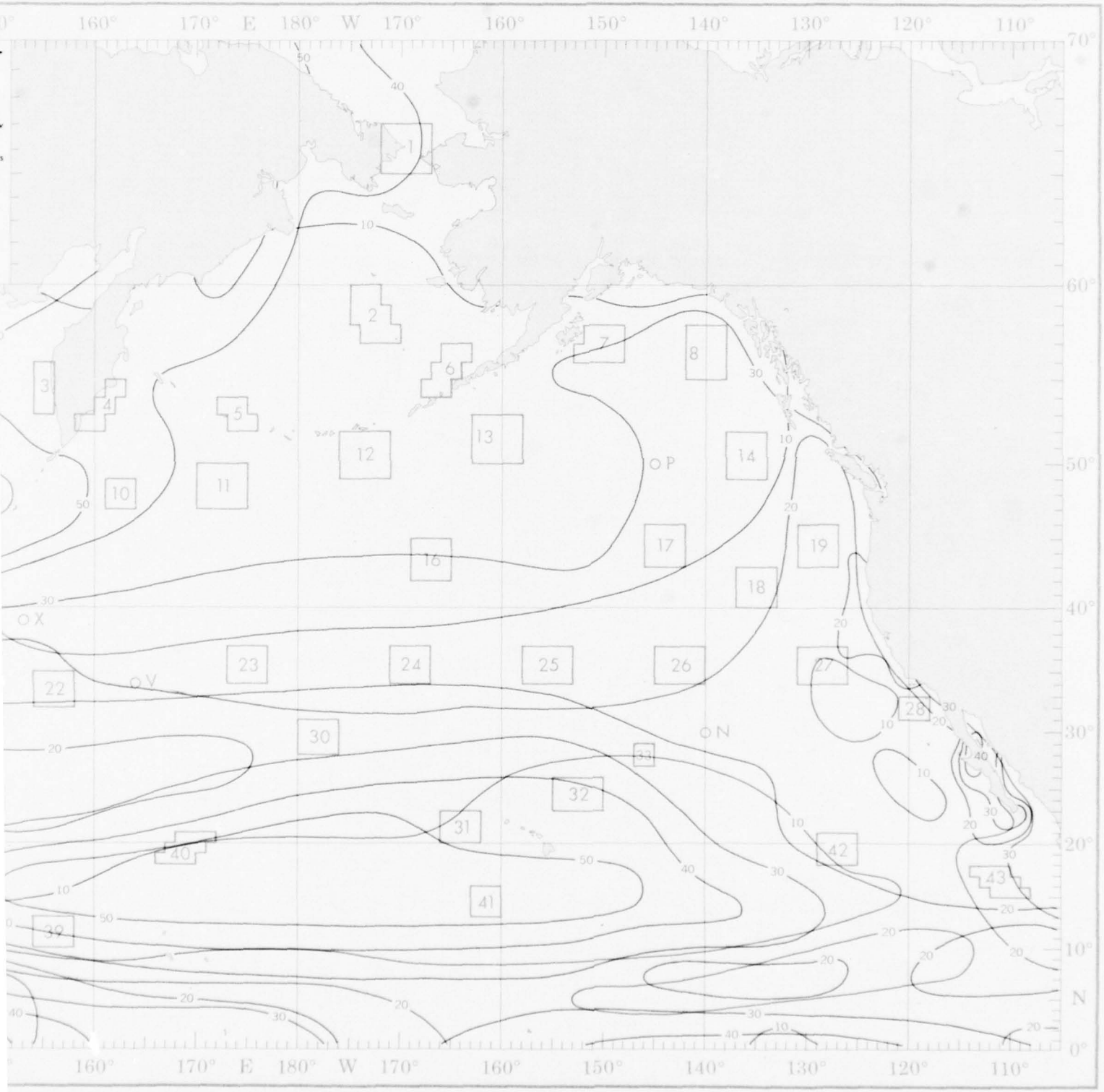
JUNE



LCC \ Vsby	0-3	4-10	11-21	22-33	≥34
<1.5 & or <3	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <3	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥50 & ≥5	12	13	15	7	3
N C & ≥10	4	2	1	+	0

1234

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	+	+	+	0	0
<10 & OR <2	+	+	+	+	0
<20 & OR <5	1	4	7	+	0
VSBY ≥5	7	39	51	3	0
≥50 & ≥5	4	14	13	+	0
NC & ≥10	3	14	12	+	0

4789

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	4	1	+
<6 & OR <2	1	5	10	5	+
VSBY <2	1	4	8	4	+
<10 & OR <2	1	7	15	8	1
<20 & OR <5	2	14	29	17	2
VSBY ≥5	4	19	34	15	1
≥50 & ≥5	1	5	8	2	+
NC & ≥10	+	1	2	1	+

5313

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	0
<6 & OR <2	+	1	2	+	+
VSBY <2	+	1	1	+	+
<10 & OR <2	+	1	3	1	+
<20 & OR <5	1	6	15	5	+
VSBY ≥5	4	29	48	8	+
≥50 & ≥5	3	24	35	4	+
NC & ≥10	3	21	30	3	+

3759

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	0
<6 & OR <2	1	3	5	1	+
VSBY <2	1	2	3	+	+
<10 & OR <2	1	5	8	2	+
<20 & OR <5	3	12	19	5	+
VSBY ≥5	7	32	39	8	+
≥50 & ≥5	4	15	15	2	+
NC & ≥10	3	12	12	1	+

4016

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	+	0
<6 & OR <2	+	4	5	2	+
VSBY <2	+	4	4	1	+
<10 & OR <2	1	5	7	4	1
<20 & OR <5	2	9	21	9	2
VSBY ≥5	3	19	45	11	1
≥50 & ≥5	1	11	19	5	+
NC & ≥10	1	8	14	4	+

1138

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	8	8	0	0
<6 & OR <2	1	10	10	1	0
VSBY <2	1	8	8	1	0
<10 & OR <2	1	15	11	2	0
<20 & OR <5	3	22	23	4	1
VSBY ≥5	6	39	25	7	1
≥50 & ≥5	2	24	10	2	0
NC & ≥10	1	12	4	1	0

106

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	5	7	2	+
<6 & OR <2	2	7	10	3	+
VSBY <2	2	6	8	2	+
<10 & OR <2	3	10	15	4	+
<20 & OR <5	6	22	30	7	+
VSBY ≥5	6	26	27	5	+
≥50 & ≥5	1	7	8	2	+
NC & ≥10	1	5	5	1	+

1745

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	6	4	2	0
<6 & OR <2	3	11	6	2	0
VSBY <2	2	8	4	2	0
<10 & OR <2	5	16	14	4	+
<20 & OR <5	6	24	22	5	+
VSBY ≥5	9	34	29	4	+
≥50 & ≥5	4	14	9	1	0
NC & ≥10	3	12	8	+	0

390

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	4	1	1	+
<6 & OR <2	1	8	7	3	1
VSBY <2	+	3	2	1	+
<10 & OR <2	3	15	15	4	1
<20 & OR <5	5	26	24	6	1
VSBY ≥5	8	41	35	4	+
≥50 & ≥5	1	12	8	+	0
NC & ≥10	1	12	7	0	0

427

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	7	6	+	+
<6 & OR <2	5	8	8	+	1
VSBY <2	4	7	6	+	+
<10 & OR <2	6	10	9	+	1
<20 & OR <5	8	15	18	2	1
VSBY ≥5	12	29	27	2	1
≥50 & ≥5	8	16	12	1	0
NC & ≥10	6	12	7	+	0

651

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	11	14	2	+
<6 & OR <2	2	14	20	4	1
VSBY <2	2	12	16	3	+
<10 & OR <2	3	18	26	5	1
<20 & OR <5	5	28	38	7	1
VSBY ≥5	3	20	25	4	+
≥50 & ≥5	+	3	4	1	0
NC & ≥10	+	1	3	+	0

1512

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	8	3	+
<6 & OR <2	2	11	12	5	1
VSBY <2	2	9	9	4	+
<10 & OR <2	3	17	18	7	1
<20 & OR <5	6	30	33	10	1
VSBY ≥5	4	25	26	5	+
≥50 & ≥5	1	9	3	+	+
NC & ≥10	+	2	2	+	0

3265

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	8	3	+
<6 & OR <2	1	7	13	6	1
VSBY <2	1	5	10	4	1
<10 & OR <2	2	11	17	9	1
<20 & OR <5	3	19	26	13	1
VSBY ≥5	4	24	30	9	1
≥50 & ≥5	2	7	9	2	+
NC & ≥10	1	5	6	1	0

1338

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	6	8	2	+
<6 & OR <2	2	8	12	3	+
VSBY <2	1	5	8	1	+
<10 & OR <2	2	12	19	4	1
<20 & OR <5	3	22	33	7	1
VSBY ≥5	4	26	34	7	1
≥50 & ≥5	1	7	7	2	+
NC & ≥10	1	6	6	2	+

1223

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	3	+	0
<6 & OR <2	1	4	4	1	+
VSBY <2	1	2	2	+	+
<10 & OR <2	1	8	9	2	+
<20 & OR <5	3	17	23	4	+
VSBY ≥5	7	34	44	5	+
≥50 & ≥5	3	12	13	1	0
NC & ≥10	2	11	12	1	0

2337

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	3	2	+	+
<6 & OR <2	2	5	5	1	+
VSBY <2	2	3	2	+	+
<10 & OR <2	2	8	11	2	+
<20 & OR <5	3	15	25	4	+
VSBY ≥5	7	32	43	6	+
≥50 & ≥5	3	11	12	1	0
NC & ≥10	3	10	11	1	0

1473

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	5	3	+	0
<6 & OR <2	3	7	4	1	0
VSBY <2	2	5	3	1	0
<10 & OR <2	3	10	5	1	0
<20 & OR <5	5	15	6	3	0
VSBY ≥5	11	43	26	3	0
≥50 & ≥5	8	32	22	1	0
NC & ≥10	6	20	13	+	0

439

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	3	4	2	1
VSBY <2	+	2	1	1	+
<10 & OR <2	1	6	10	4	1
<20 & OR <5	2	15	22	8	2
VSBY ≥5	5	34	40	8	1
≥50 & ≥5	3	18	16	2	+
NC & ≥10	2	15	13	1	+

3044

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	4	4	1	0
VSBY <2	+	1	1	+	0
<10 & OR <2	2	11	10	2	0
<20 & OR <5	3	22	22	2	0
VSBY ≥5	8	46	38	2	0
≥50 & ≥5	4	18	12	+	0
NC & ≥10	3	17	11	+	0

1623

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	3	4	1	+
VSBY <2	+	1	1	+	0
<10 & OR <2	1	6	12	3	+
<20 & OR <5	1	12	27	8	1
VSBY ≥5	2	23	54	15	1
≥50 & ≥5	1	9	18	5	+
NC & ≥10	1	8	16	5	+

4107

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	3	3	+	0
VSBY <2	+	1	1	+	0
<10 & OR <2	2	9	10	1	0
<20 & OR <5	4	25	25	3	+
VSBY ≥5	6	36	45	7	+
≥50 & ≥5	1	8	16	4	+
NC & ≥10	1	5	10	3	+

3784

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	1	3	5	1	+
VSBY <2	+	1	2	+	+
<10 & OR <2	1	7	11	2	+
<20 & OR <5	2	16	23	4	+
VSBY ≥5	5	35	41	4	+
≥50 & ≥5	3	19	20	2	+
NC & ≥10	2	14	15	1	+

2739

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	1	1	+	0
<10 & OR <2	+	4	5	+	0
<20 & OR <5	1	8	11	1	0
VSBY ≥5	8	45	43	2	0
≥50 & ≥5	7	34	26	1	0
NC & ≥10	6	32	23	1	0

1191

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	+	1	3	1	0
<20 & OR <5	+	3	9	1	0
VSBY ≥5	4	31	60	4	0
≥50 & ≥5	4	26	47	2	0
NC & ≥10	3	24	44	2	0

1426

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	4	6	2	+
<20 & OR <5	1	10	12	3	+
VSBY ≥5	6	59	25	2	+
≥50 & ≥5	5	49	16	1	+
NC & ≥10	4	43	13	+	0

2881

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	1	3	2	0	0
<20 & OR <5	1	6	5	+	0
VSBY ≥5	7	55	34	2	0
≥50 & ≥5	6	49	28	2	0
NC & ≥10	6	47	26	2	0

563

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	3	+	+
<20 & OR <5	+	5	8	1	+
VSBY ≥5	4	45	48	2	+
≥50 & ≥5	4	38	37	1	0
NC & ≥10	4	36	33	1	0

1052

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	2	0	0
<20 & OR <5	+	3	8	+	0
VSBY ≥5	1	12	83	3	+
≥50 & ≥5	1	9	75	2	+
NC & ≥10	1	9	74	2	+

630

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	3	0	0
<20 & OR <5	+	4	8	+	0
VSBY ≥5	2	31	65	1	0
≥50 & ≥5	2	25	55	1	0
NC & ≥10	2	23	52	1	0

508

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	1
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	6	1	1
<20 & OR <5	0	2	11	2	1
VSBY ≥5	0	13	75	10	1
≥50 & ≥5	0	10	60	9	0
NC & ≥10	0	10	59	9	0

176

Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

V

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	2	2	*	0
<6 & OR <2	1	3	5	1	*
VSBY <2	1	2	3	*	*
<10 & OR <2	1	5	8	2	*
<20 & OR <5	3	12	19	5	*
VSBY ≥5	7	32	39	8	*
≥50 & ≥5	4	15	15	2	*
NC & ≥10	3	12	12	1	*

4016

X

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	2	3	*	0
<6 & OR <2	*	4	5	2	*
VSBY <2	*	4	4	1	*
<10 & OR <2	1	5	7	4	1
<20 & OR <5	2	9	21	9	2
VSBY ≥5	3	19	45	11	1
≥50 & ≥5	1	11	19	5	*
NC & ≥10	1	8	14	4	*

1138

1

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	8	8	0	0
<6 & OR <2	1	10	10	1	0
VSBY <2	1	8	8	1	0
<10 & OR <2	1	15	11	2	0
<20 & OR <5	3	22	23	4	1
VSBY ≥5	6	39	25	2	1
≥50 & ≥5	2	24	10	2	0
NC & ≥10	1	12	4	1	0

106

2

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	10	11	2	1
<6 & OR <2	2	12	13	3	1
VSBY <2	1	10	11	2	1
<10 & OR <2	2	17	21	6	1
<20 & OR <5	5	32	36	9	1
VSBY ≥5	6	24	27	5	*
≥50 & ≥5	1	3	4	1	0
NC & ≥10	1	3	3	1	0

805

3

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	4	11	8	2	0
<6 & OR <2	4	13	12	3	*
VSBY <2	4	12	10	3	*
<10 & OR <2	5	18	16	5	*
<20 & OR <5	9	25	24	6	*
VSBY ≥5	8	28	16	2	*
≥50 & ≥5	4	11	6	1	0
NC & ≥10	2	6	4	*	0

2407

4

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	5	8	10	1	*
<6 & OR <2	6	9	12	1	*
VSBY <2	5	8	10	1	*
<10 & OR <2	6	10	13	1	*
<20 & OR <5	8	17	20	2	*
VSBY ≥5	14	29	24	3	*
≥50 & ≥5	8	11	9	1	0
NC & ≥10	7	9	6	1	0

953

5

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	4	5	5	2	0
<6 & OR <2	4	7	8	3	*
VSBY <2	4	6	6	2	*
<10 & OR <2	5	9	12	3	*
<20 & OR <5	10	24	22	6	*
VSBY ≥5	10	29	26	4	*
≥50 & ≥5	1	4	4	*	0
NC & ≥10	1	2	3	*	0

1639

9

0–3	4–10	11–21	22–33	≥34
4	7	6	*	*
5	8	8	*	1
4	7	5	*	*
6	10	9	*	1
8	15	18	2	1
12	29	27	2	1
8	16	12	1	0
6	12	7	*	0

651

10

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	2	11	14	2	*
<6 & OR <2	2	14	20	4	1
VSBY <2	2	12	16	3	*
<10 & OR <2	3	18	26	5	1
<20 & OR <5	5	28	38	7	1
VSBY ≥5	3	20	25	4	*
≥50 & ≥5	*	3	4	1	0
NC & ≥10	*	1	3	*	0

1512

11

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	2	8	8	3	*
<6 & OR <2	2	11	12	5	1
VSBY <2	2	9	9	4	*
<10 & OR <2	3	17	18	7	1
<20 & OR <5	6	30	33	10	1
VSBY ≥5	4	25	26	5	*
≥50 & ≥5	1	3	3	*	*
NC & ≥10	*	2	2	*	0

3265

12

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	4	6	2	*
<6 & OR <2	2	7	11	3	*
VSBY <2	1	5	7	2	*
<10 & OR <2	3	13	19	5	1
<20 & OR <5	5	25	33	9	1
VSBY ≥5	6	28	29	7	1
≥50 & ≥5	1	6	3	1	*
NC & ≥10	1	4	3	1	*

1927

13

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	2	6	7	2	*
<6 & OR <2	2	9	12	4	1
VSBY <2	2	6	8	3	*
<10 & OR <2	3	14	22	6	1
<20 & OR <5	5	24	36	9	1
VSBY ≥5	4	24	32	6	1
≥50 & ≥5	1	5	5	1	0
NC & ≥10	1	4	4	1	0

1556

14

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	4	4	1	*
<6 & OR <2	1	6	8	3	*
VSBY <2	1	4	6	1	*
<10 & OR <2	2	11	15	5	*
<20 & OR <5	4	20	31	7	*
VSBY ≥5	6	27	39	7	*
≥50 & ≥5	2	6	6	1	*
NC & ≥10	1	4	5	1	*

2324

15

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	1	2	*	*
<6 & OR <2	1	3	4	1	*
VSBY <2	*	1	2	*	*
<10 & OR <2	1	7	8	3	*
<20 & OR <5	2	13	14	4	*
VSBY ≥5	4	42	39	4	0
≥50 & ≥5	2	26	27	2	0
NC & ≥10	1	5	7	*	0

945

19

0–3	4–10	11–21	22–33	≥34
2	3	2	*	*
2	5	5	1	*
2	3	2	*	*
2	8	11	2	*
3	15	25	4	*
7	32	43	6	*
3	11	17	1	0
3	10	11	1	0

1479

20

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	2	5	3	*	0
<6 & OR <2	3	7	4	1	0
VSBY <2	2	5	3	1	0
<10 & OR <2	3	10	5	1	0
<20 & OR <5	5	15	6	3	0
VSBY ≥5	11	43	26	3	0
≥50 & ≥5	8	32	22	1	0
NC & ≥10	5	20	13	*	0

439

21

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	1	1	*	*
<6 & OR <2	*	3	4	2	1
VSBY <2	*	2	1	1	*
<10 & OR <2	1	6	10	4	1
<20 & OR <5	2	15	22	8	2
VSBY ≥5	5	34	40	8	1
≥50 & ≥5	3	18	16	2	*
NC & ≥10	2	15	13	1	*

3044

22

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	2	2	1	0
<6 & OR <2	*	3	5	2	*
VSBY <2	*	1	1	1	0
<10 & OR <2	1	6	12	5	*
<20 & OR <5	1	14	26	7	*
VSBY ≥5	5	33	43	7	*
≥50 & ≥5	3	18	16	2	*
NC & ≥10	3	16	13	1	*

1484

23

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	4	3	1	*
<6 & OR <2	1	6	7	3	1
VSBY <2	*	3	3	1	*
<10 & OR <2	2	11	15	5	1
<20 & OR <5	3	18	28	7	1
VSBY ≥5	5	28	41	8	1
≥50 & ≥5	2	12	13	2	*
NC & ≥10	2	10	11	2	0

1087

24

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	3	4	1	*
<6 & OR <2	1	5	7	2	*
VSBY <2	1	3	4	1	*
<10 & OR <2	2	11	15	4	1
<20 & OR <5	3	19	26	6	1
VSBY ≥5	4	34	40	8	*
≥50 & ≥5	2	14	14	3	*
NC & ≥10	2	13	12	2	*

1159

25

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	2	1	*	*
<6 & OR <2	*	4	5	1	*
VSBY <2	*	2	1	0	0
<10 & OR <2	2	10	13	2	*
<20 & OR <5	3	18	22	2	*
VSBY ≥5	6	40	43	4	*
≥50 & ≥5	3	19	18	2	0
NC & ≥10	3	18	17	1	0

1282

29

0–3	4–10	11–21	22–33	≥34
*	1	1	*	*
1	3	5	1	*
*	1	2	*	*
1	7	11	2	*
2	16	23	4	*
5	35	41	4	*
3	19	20	2	*
2	14	15	1	*

2733

30

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	1	0	0
<6 & OR <2	*	1	2	*	0
VSBY <2	0	1	1	*	0
<10 & OR <2	*	4	5	*	0
<20 & OR <5	1	8	11	1	0
VSBY ≥5	8	45	43	2	0
≥50 & ≥5	7	34	26	1	0
NC & ≥10	6	32	23	1	0

1191

31

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	*	0	0
<6 & OR <2	*	*	1	*	0
VSBY <2	0	0	0	0	0
<10 & OR <2	*	1	3	1	0
<20 & OR <5	*	3	9	1	0
VSBY ≥5	4	31	60	4	0
≥50 & ≥5	4	26	47	2	0
NC & ≥10	3	24	44	2	0

1426

32

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	*	0	0
<6 & OR <2	*	*	1	*	0
VSBY <2	0	*	*	0	0
<10 & OR <2	*	1	6	1	0
<20 & OR <5	*	4	17	2	0
VSBY ≥5	3	24	55	7	*
≥50 & ≥5	2	19	41	4	*
NC & ≥10	2	18	38	4	*

4121

33

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	*	0	0
<6 & OR <2	*	*	*	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	*	1	5	*	0
<20 & OR <5	*	5	14	1	*
VSBY ≥5	3	28	64	4	*
≥50 & ≥5	2	16	26	2	0
NC & ≥10	2	15	23	1	0

1636

34

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	*	*	*
<6 & OR <2	*	1	2	1	*
VSBY <2	*	*	1	*	*
<10 & OR <2	*	2	8	3	*
<20 & OR <5	1	6	16	5	*
VSBY ≥5	5	33	48	8	*
≥50 & ≥5	4	27	31	4	*
NC & ≥10	3	24	26	3	0

5864

35

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	*	1	*	*
<6 & OR <2	*	1	3	1	*
VSBY <2	*	1	2	1	*
<10 & OR <2	*	4	7	2	*
<20 & OR <5	1	8	13	3	*
VSBY ≥5	5	44	34	4	*
≥50 & ≥5	8	36	23	2	*
NC & ≥10	7	31	20	1	*

6316

39

0–3	4–10	11–21	22–33	≥34
0	*	0	0	0
0	*	1	0	0
0	0	0	0	0
0	1	2	0	0
*	3	8	*	0
1	12	23	3	*
1	9	25	2	*
1	8	24	2	*

630

40

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	*	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	0	*	0	0
<10 & OR <2	*	2	3	0	0
<20 & OR <5	*	4	8	*	0
VSBY ≥5	2	31	65	1	0
≥50 & ≥5	2	25	55	1	0
NC & ≥10	2	23	52	1	0

508

41

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	1
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	6	1	1
<20 & OR <5	0	2	11	2	1
VSBY ≥5	0	13	75	10	1
≥50 & ≥5	0	10	60	9	0
NC & ≥10	0	10	59	9	0

176

42

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	*	0	0
<6 & OR <2	*	1	1	*	*
VSBY <2	0	0	0	0	0
<10 & OR <2	*	6	13	0	0
<20 & OR <5	1	20	32	*	0
VSBY ≥5	4	38	56	1	0
≥50 & ≥5	2	11	14	*	0
NC & ≥10	2	10	13	*	0

707

43

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	*	0	0	0
<6 & OR <2	*	1	1	*	*
VSBY <2	0	0	0	0	*
<10 & OR <2	1	6	6	1	*
<20 & OR <5	2	16	14	1	*
VSBY ≥5	11	57	30	1	0
≥50 & ≥5	8	36	13	1	0
NC & ≥10	8	35	12	*	0

736

44

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	*	*	*	*	0
<6 & OR <2	*	2	1	*	0
VSBY <2	*	1	*	*	0
<10 & OR <2	1	5	4	*	0
<20 & OR <5	2	11	11	1	0
VSBY ≥5	13	53	28	1	*
≥50 & ≥5	11	40	17	*	*
NC & ≥10	10	36	15	*	*

2435

45

WIND SPEED (KNOTS)

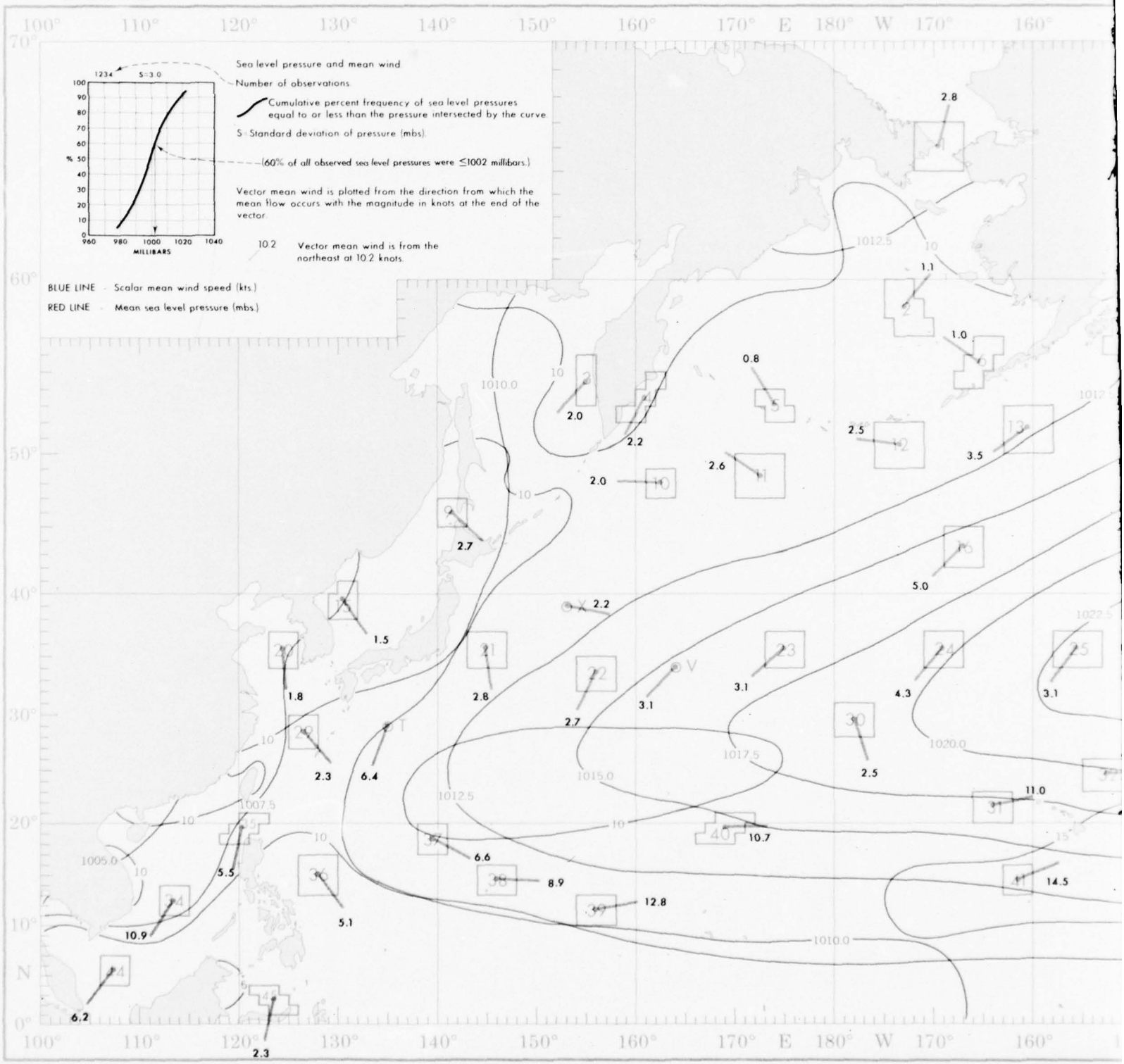
LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	3	2	0	0
VSBY <2	0	2	0	0	0
<10 & OR <2	2	5	2	0	0
<20 & OR <5	3	5	2	0	0
VSBY ≥5	43	36	20	0	0
≥50 & ≥5	39	28	16	0	0
NC & ≥10	39	28	16	0	0

61

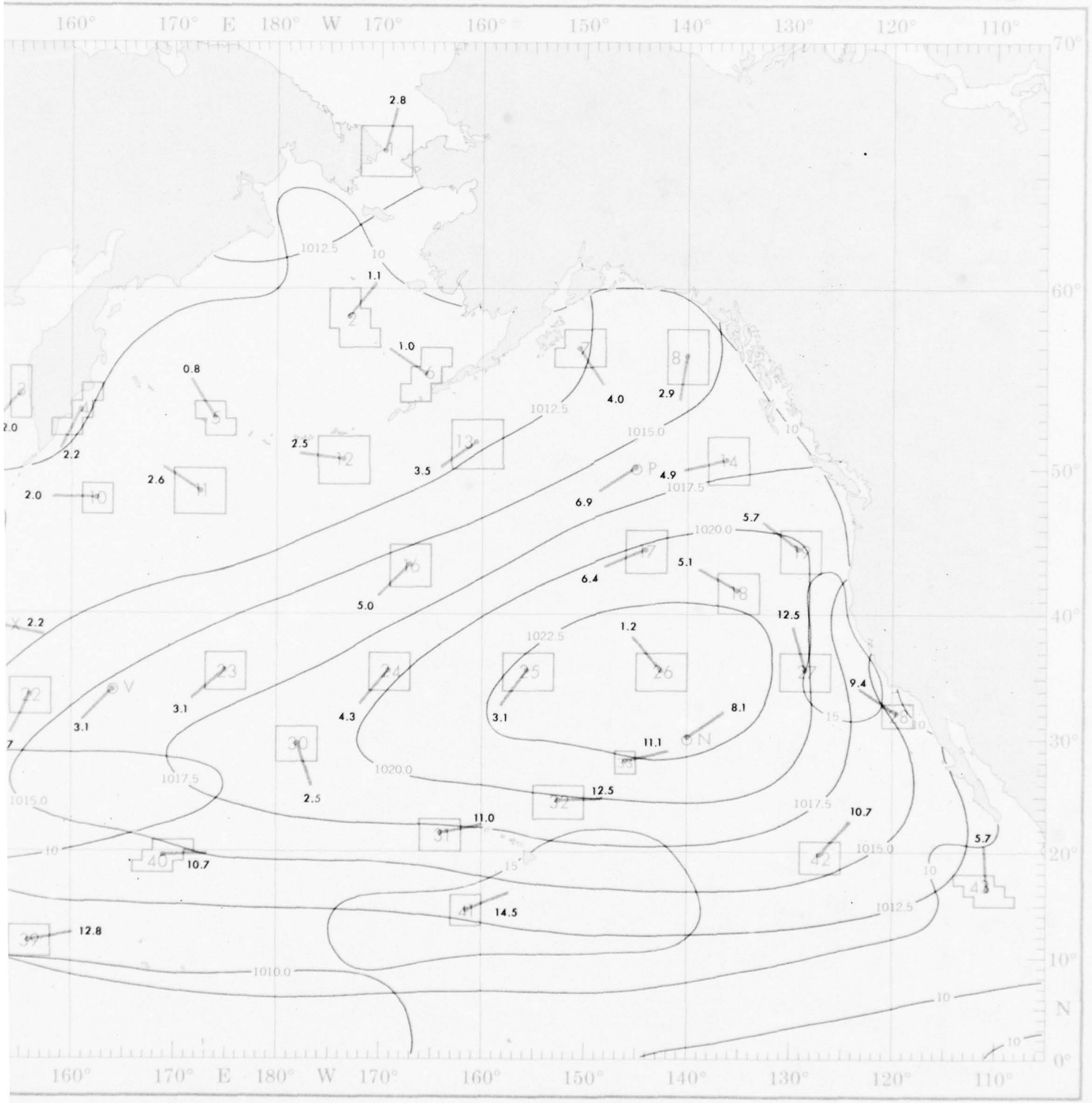
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE

SEA LEVEL PR



SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE



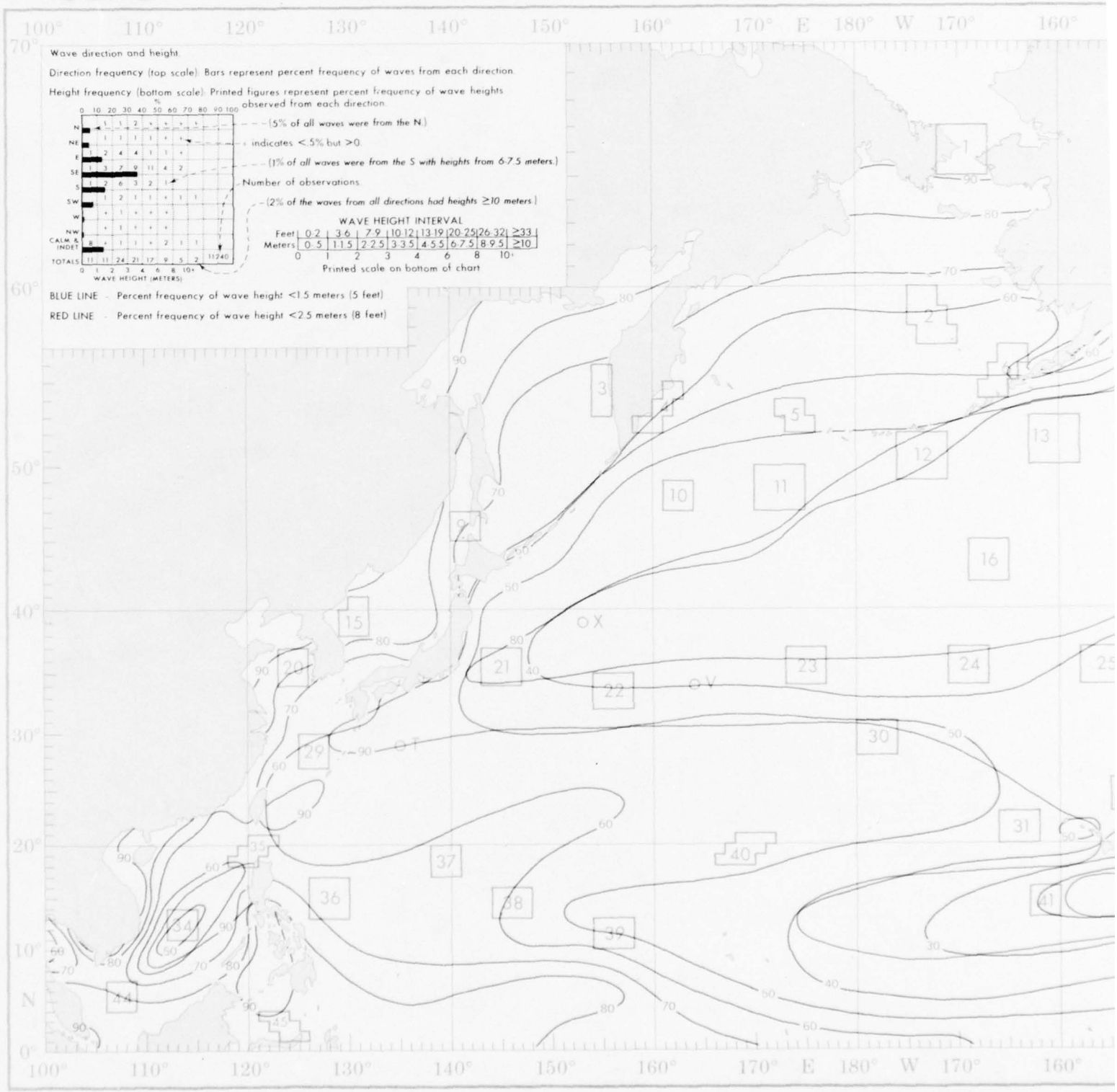
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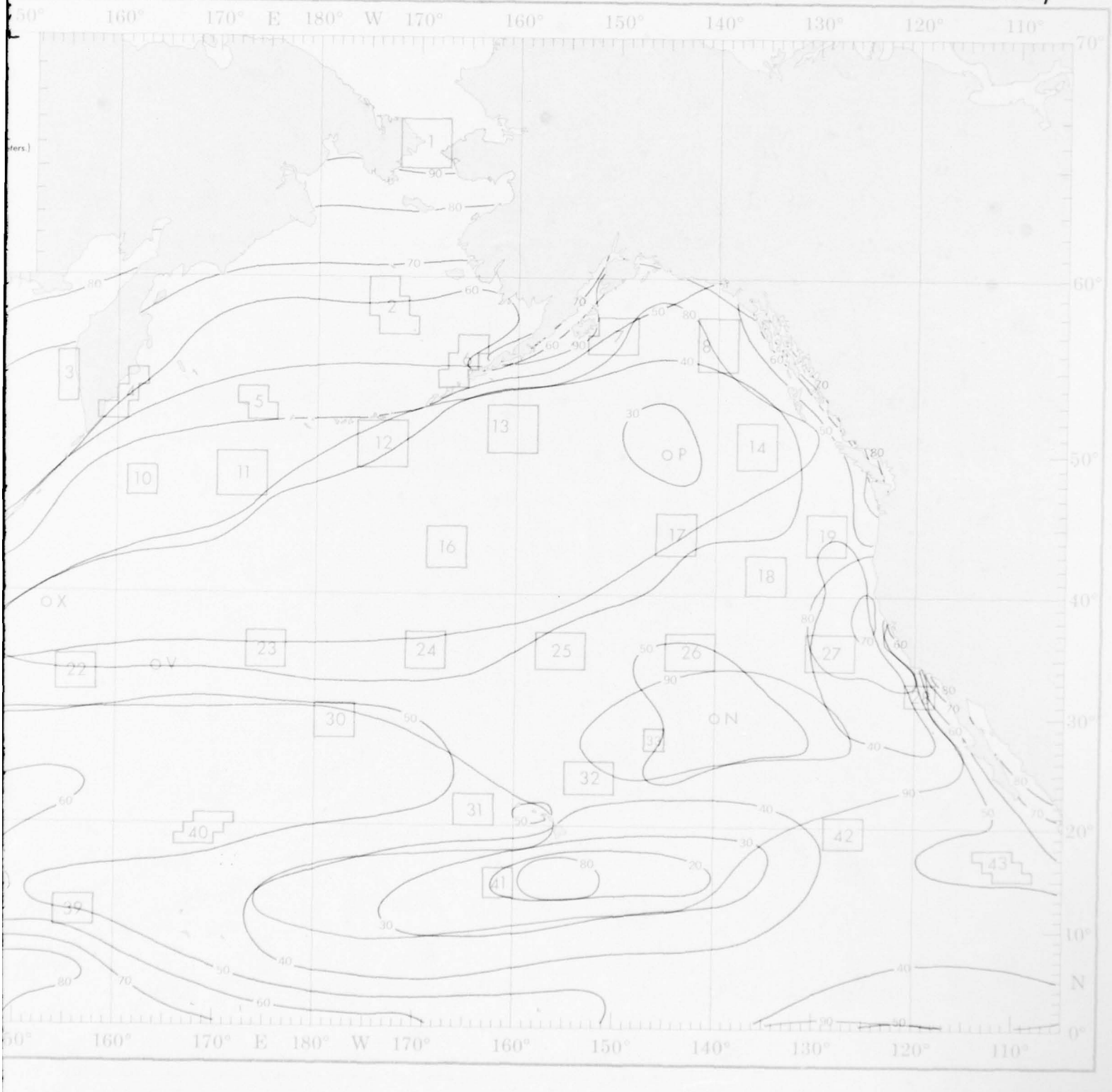


esent the objective compilation of available data for specified areas without regard to suspected biases.
analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

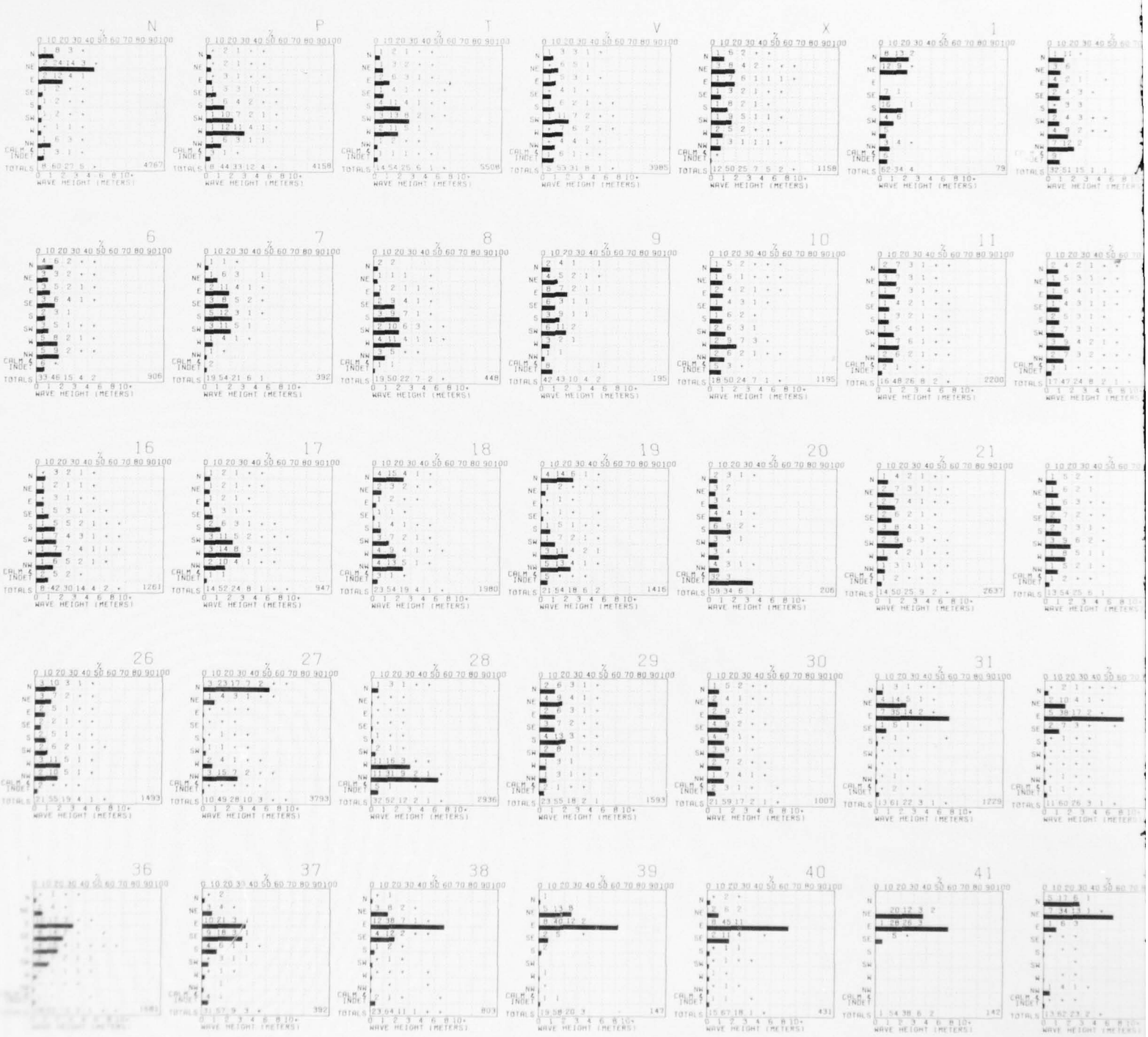
JUNE


Wave direction and height.
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
+ indicates < 5% but > 0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 3-6 7-9 10-12 13-19 20-25 26-32 ≥33
Meters 0-.5 1-1.5 2-2.5 3-3.5 4-5.5 6-7.5 8-9.5 ≥10
Printed scale on bottom of chart
BLUE LINE - Percent frequency of wave height: <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)
WAVE HEIGHT (METERS)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WAVES (<1.5 AND <2.5 METERS)



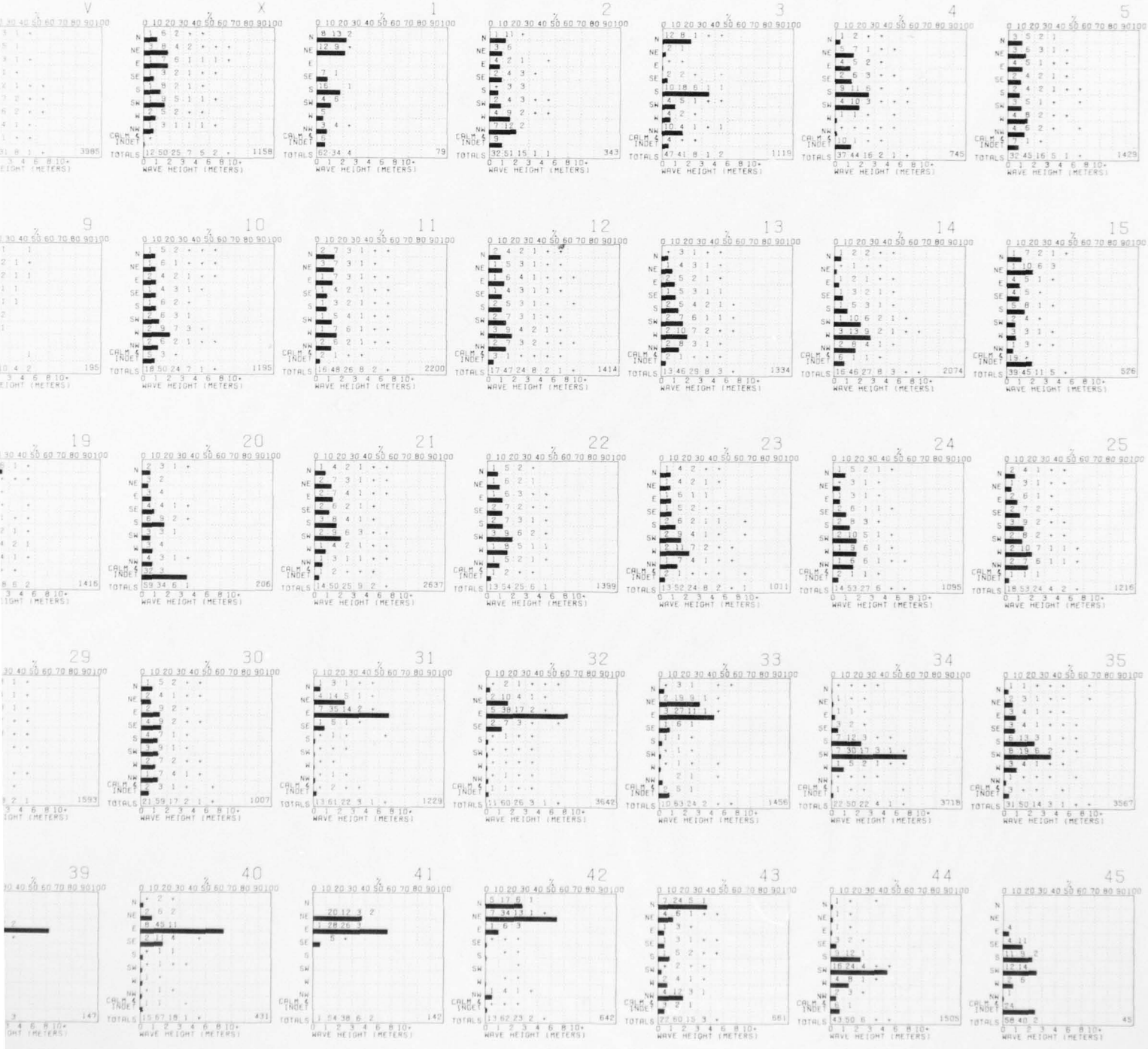
WAVE DIRECTION AND HEIGHT



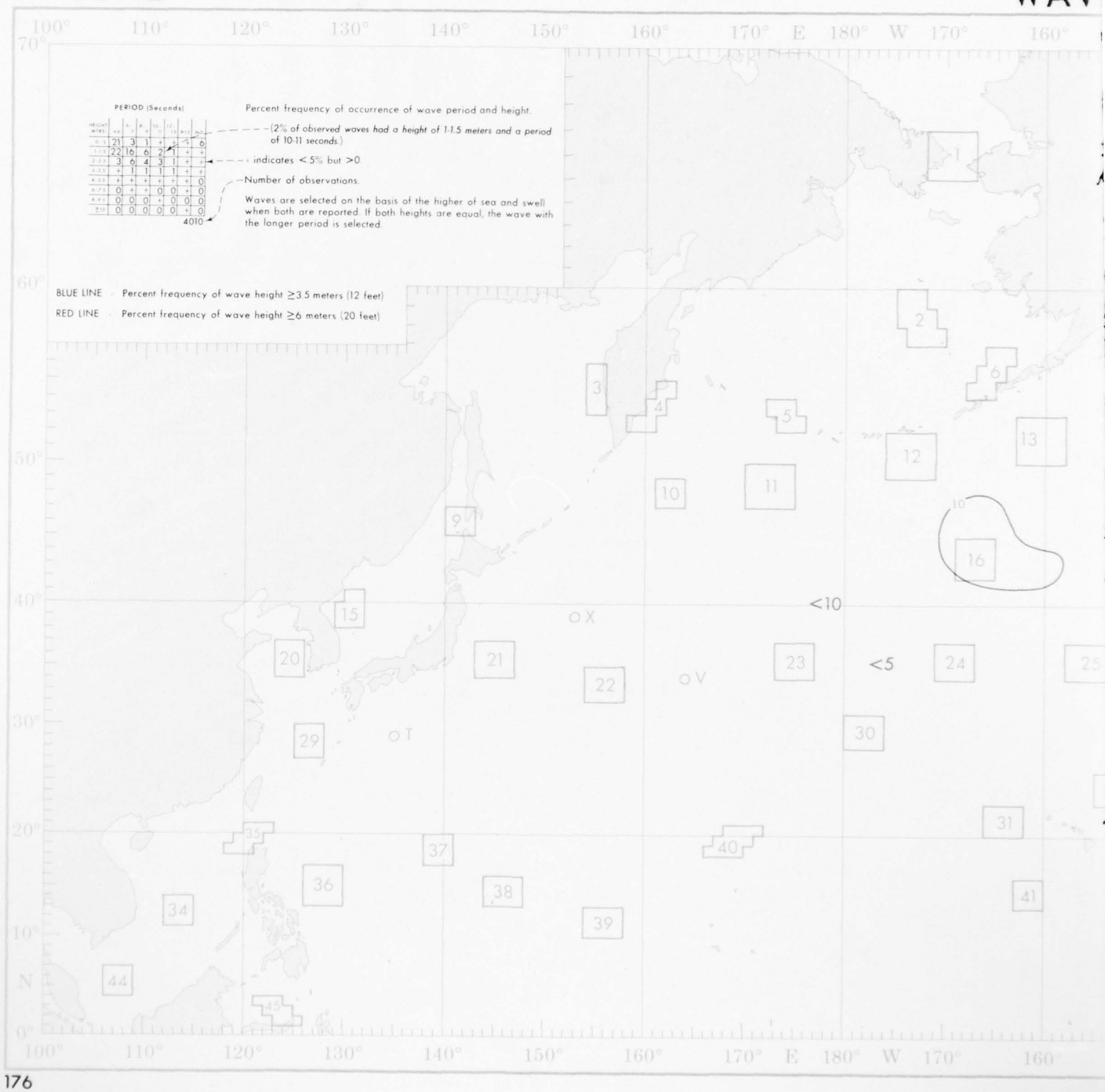
Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bia

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he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.


PERIOD (Seconds)
HEIGHT METERS
<6 6-7 8-9 10-11 12-13 >13 ≥10
0-.5 21 3 1 + + + 6
1-1.5 22 16 6 2 1 + +
2-2.5 3 6 4 3 1 + +
3-3.5 + 1 1 1 1 + +
4-5.5 + + + + + + 0
6-7.5 0 + + 0 0 + 0
8-9.5 0 0 0 + 0 0 0
≥10 0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates <.5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
<10
<5
X
V
T
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 35 36 37 38 39 40 41 44 45

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	2	+	+	0	0	1
1-1.5	22	24	8	2	+	0	3
2-2.5	5	13	6	2	+	0	1
3-3.5	1	2	1	1	0	0	+
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4788

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	3
1-1.5	14	17	7	4	1	0	1
2-2.5	2	17	9	3	1	+	+
3-3.5	1	4	5	2	+	+	0
4-5.5	+	1	2	1	+	0	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4170

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	3	3	+	0	0	7
1-1.5	4	11	19	1	+	0	19
2-2.5	2	5	11	1	+	0	6
3-3.5	+	1	4	+	+	0	1
4-5.5	0	+	1	+	+	0	+
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

5539

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	1	+	0	0	1
1-1.5	19	18	7	2	+	+	6
2-2.5	4	14	10	2	+	+	1
3-3.5	1	2	4	1	+	0	+
4-5.5	+	+	+	+	+	0	+
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4006

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	4	3	+	0	0	5
1-1.5	+	10	27	1	0	0	13
2-2.5	+	5	17	1	+	0	2
3-3.5	0	1	6	+	0	0	0
4-5.5	0	+	4	+	0	0	+
6-7.5	0	+	1	1	0	0	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

1162

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	60	0	0	1	0	0	10
1-1.5	25	0	0	0	0	0	1
2-2.5	2	0	0	0	0	0	1
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

102

HEIGHT (MTRS)	PERIOD (SE <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	8	1	0			
1-1.5	18	25	4	0			
2-2.5	1	8	4	1			
3-3.5	0	0	+	+			
4-5.5	+	0	0	0			
6-7.5	0	0	0	0			
8-9.5	0	0	0	0			
≥10	0	0	0	0			

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	27	2	0	+	0	0	7
1-1.5	26	12	3	+	1	0	2
2-2.5	4	7	3	+	+	0	+
3-3.5	+	2	1	1	0	0	0
4-5.5	0	+	1	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

944

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	3	1	1	0	0	3
1-1.5	24	17	6	2	1	1	2
2-2.5	4	9	3	1	1	+	1
3-3.5	1	2	1	+	1	0	+
4-5.5	0	+	+	1	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

404

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	1	1	0	0	1
1-1.5	21	15	8	2	1	1	1
2-2.5	6	7	5	2	1	1	+
3-3.5	1	2	2	2	+	+	0
4-5.5	+	+	0	1	+	+	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

466

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	1	0	0	0	0	26
1-1.5	19	4	+	0	0	0	15
2-2.5	3	1	1	0	0	0	4
3-3.5	+	0	2	0	0	0	1
4-5.5	+	0	0	+	+	0	+
6-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

212

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	3	1	1	0	0	5
1-1.5	13	25	8	1	1	+	2
2-2.5	1	10	10	1	+	0	+
3-3.5	+	2	4	1	+	0	0
4-5.5	0	+	1	+	0	0	0
6-7.5	0	0	+	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1210

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	2	1	+	0	0	3
1-1.5	17	20	8	1	+	+	1
2-2.5	2	8	11	3	1	+	+
3-3.5	+	2	2	1	1	+	+
4-5.5	0	+	1	+	+	+	+
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2257

HEIGHT (MTRS)	PERIOD (SE <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	1	+				
1-1.5	20	17	5	1			
2-2.5	3	7	8	3			
3-3.5	+	2	3	2			
4-5.5	+	+	1	+			
6-7.5	0	0	+	+			
8-9.5	0	0	0	+			
≥10	0	0	0	0			

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	3
1-1.5	14	14	5	2	+	+	5
2-2.5	3	14	8	3	+	+	2
3-3.5	+	3	6	2	1	+	+
4-5.5	+	1	2	1	+	0	+
6-7.5	0	+	+	1	+	0	0
8-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

1277

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	1	+	+	0	0	2
1-1.5	20	19	8	1	1	+	1
2-2.5	3	8	8	3	1	1	+
3-3.5	1	2	3	2	+	+	+
4-5.5	+	1	1	+	0	+	0
6-7.5	0	0	+	+	0	+	0
8-9.5	0	+	0	0	0	0	0
≥10	0	0	0	0	0	0	0

977

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	1	+	0	0	4
1-1.5	23	18	9	1	+	+	1
2-2.5	4	7	5	1	+	+	+
3-3.5	+	1	2	+	+	+	0
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2030

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	3	1	+	0	0	5
1-1.5	27	17	5	2	1	+	1
2-2.5	4	7	5	2	+	+	+
3-3.5	+	2	1	2	+	+	+
4-5.5	+	+	+	+	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1438

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	28	2	1	+	0	0	30
1-1.5	21	7	+	+	0	0	3
2-2.5	1	4	+	0	0	0	0
3-3.5	0	0	+	+	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

223

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	+	+	0	0	2
1-1.5	22	17	5	1	1	+	2
2-2.5	5	10	7	2	+	+	1
3-3.5	1	2	3	1	1	+	+
4-5.5	+	+	+	1	+	+	+
6-7.5	0	+	+	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2705

HEIGHT (MTRS)	PERIOD (SE <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	+				
1-1.5	25	18	6	2			
2-2.5	5	9	6	2			
3-3.5	+	2	2	1			
4-5.5	+	+	+	+			
6-7.5	0	0	0	0			
8-9.5	0	0	0	0			
≥10	0	0	0	0			

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	+	1	0	0	3
1-1.5	26	17	5	2	1	+	2
2-2.5	4	7	5	2	+	+	+
3-3.5	+	1	1	1	+	+	+
4-5.5	+	0	+	+	+	+	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1547

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	1
1-1.5	20	17	8	1	1	+	1
2-2.5	4	10	9	3	1	+	1
3-3.5	1	3	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

3872

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	24	2	1	1	0	0	5
1-1.5	33	12	4	1	+	+	1
2-2.5	4	5	2	1	+	+	+
3-3.5	+	1	1	+	+	+	0
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3008

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	1	1	0	0	0	3
1-1.5	28	20	3	1	+	0	2
2-2.5	3	6	6	2	+	+	1
3-3.5	+	1	1	1	+	+	+
4-5.5	+	+	+	+	+	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1623

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	1	1	0	0	3
1-1.5	27	19	5	1	1	+	4
2-2.5	3	6	3	1	1	1	1
3-3.5	+	+	1	+	+	0	0
4-5.5	0	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1042

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	+	+	0	0	1
1-1.5	28	21	6	1	1	+	2
2-2.5	6	8	6	2	+	+	+
3-3.5	+	1	+	+	+	+	+
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1244

HEIGHT (MTRS)	PERIOD (SE <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	1	+				
1-1.5	29	19	7	2			
2-2.5	6	10	6	2			
3-3.5	+	1	1	+			
4-5.5	+	+	+	+			
6-7.5	0	+	0	0			
8-9.5	0	0	0	0			
≥10	0	0	0	0			

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26	2	+	+	0	0	2
1-1.5	29	20	3	1	+	+	1
2-2.5	1	4	3	3	1	+	0
3-3.5	+	1	+	1	1	0	0
4-5.5	+	0	1	+	+	+	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

1741

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	21	4	+	1	0	0	7
1-1.5	31	15	7	1	1	0	2
2-2.5	2	2	3	1	0	+	0
3-3.5	0	1	1	1	1	+	0
4-5.5	0	0	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

399

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	3	+	+	0	0	3
1-1.5	28	22	9	2	1	0	1
2-2.5	3	4	3	1	+	+	+
3-3.5	+	+	+	+	0	0	0
4-5.5	0	+	0	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

827

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	0	1	0	0	3
1-1.5	29	15	6	4	1	0	0
2-2.5	5	9	5	1	0	0	0
3-3.5	0	0	1	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

153

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	+	1	0	0	2
1-1.5	37	19	6	2	0	0	1
2-2.5	4	7	4	2	+	0	+
3-3.5	0	0	+	0	0	0	+
4-5.5	0	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

446

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	0	0	0	0	0
1-1.5	17	26	8	1	1	0	1
2-2.5	11	20	7	1	0	0	0
3-3.5	0	3	3	0	0	0	0
4-5.5	0	0	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

142

HEIGHT (MTRS)	PERIOD (SE <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	1	+				
1-1.5	30	19	7	2			
2-2.5	4	9	7	2			
3-3.5	0	1	1	+			
4-5.5	0	0	0	+			
6-7.5	0	0	0	0			
8-9.5	0	0	0	0			
≥10	0	0	0	0			

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

T

JUNE

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	+	1	+	0	0	0	1
.5-1	6	7	2	+	+	+	6
1-1.5	4	10	2	+	+	+	1
1.5-2	2	4	1	+	0	+	+
2-2.5	+	+	+	+	0	+	+
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

4006

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	+	4	3	+	0	0	5
.5-1	+	10	27	1	0	0	13
1-1.5	+	5	17	1	+	0	2
1.5-2	0	1	6	+	0	0	0
2-2.5	0	+	4	+	0	0	+
2.5-3	0	+	1	1	0	0	0
3-3.5	0	0	0	+	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1162

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	60	0	0	1	0	0	10
.5-1	25	0	0	0	0	0	1
1-1.5	2	0	0	0	0	0	1
1.5-2	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

102

2

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	8	1	2	0	0	9
.5-1	18	25	4	0	1	0	1
1-1.5	1	8	4	1	0	0	+
1.5-2	0	0	+	+	+	0	0
2-2.5	+	0	0	0	0	+	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

364

3

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	45	3	+	+	0	0	9
.5-1	18	12	2	+	+	0	1
1-1.5	2	2	2	1	+	0	+
1.5-2	+	+	+	+	0	0	0
2-2.5	0	0	1	1	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1376

4

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	18	4	1	+	0	0	18
.5-1	20	10	4	1	+	0	6
1-1.5	4	6	2	1	0	+	2
1.5-2	1	1	+	+	0	0	+
2-2.5	+	+	+	0	0	0	+
2.5-3	+	0	+	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

792

5

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	20	2	2	1	0	0	10
.5-1	22	11	7	1	1	+	2
1-1.5	3	6	4	1	1	0	2
1.5-2	1	2	1	1	+	0	+
2-2.5	+	+	+	+	+	0	+
2.5-3	0	0	+	0	0	+	0
3-3.5	0	0	+	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1475

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	0	0	0	0	0	28
.5-1	+	0	0	0	0	0	15
1-1.5	1	0	0	0	0	0	4
1.5-2	2	0	0	0	0	0	1
2-2.5	0	+	+	0	+	0	+
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

212

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	3	1	1	0	0	5
.5-1	13	25	8	1	1	+	2
1-1.5	1	10	10	1	+	0	+
1.5-2	+	2	4	1	+	0	0
2-2.5	0	+	1	+	+	+	0
2.5-3	0	0	+	0	0	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1210

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	2	1	+	0	0	3
.5-1	17	20	9	1	+	+	1
1-1.5	2	8	11	3	1	+	+
1.5-2	+	2	2	1	1	+	+
2-2.5	0	+	1	+	+	+	+
2.5-3	0	0	+	+	+	0	0
3-3.5	0	0	0	+	+	+	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

2257

12

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	1	+	+	0	0	3
.5-1	20	17	5	1	1	+	1
1-1.5	3	7	8	3	1	+	1
1.5-2	+	3	5	2	1	+	+
2-2.5	+	2	3	2	1	+	+
2.5-3	+	+	1	1	+	+	0
3-3.5	0	0	+	+	+	+	0
3.5-4	0	0	0	+	+	0	0
≥4	0	0	0	0	0	0	0

1452

13

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	1	1	+	0	0	2
.5-1	18	16	7	1	1	+	1
1-1.5	3	10	10	3	1	+	1
1.5-2	+	3	2	1	1	+	+
2-2.5	+	1	1	+	+	+	+
2.5-3	+	0	+	0	0	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1367

14

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	2	+	+	0	0	6
.5-1	17	18	6	1	1	0	2
1-1.5	4	11	8	2	+	+	1
1.5-2	1	4	2	1	+	+	+
2-2.5	+	1	1	+	+	+	+
2.5-3	+	+	+	+	0	0	0
3-3.5	0	0	+	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

2111

15

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	21	1	0	0	0	0	18
.5-1	37	5	1	+	0	0	+
1-1.5	3	4	3	+	0	0	+
1.5-2	1	2	1	+	0	0	1
2-2.5	0	0	+	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

539

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	+	0	0	0	0	5
.5-1	5	2	1	+	0	0	1
1-1.5	2	2	+	+	+	+	+
1.5-2	1	2	+	+	+	+	+
2-2.5	+	+	+	1	+	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1438

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	28	2	1	+	0	0	30
.5-1	21	7	+	+	0	0	3
1-1.5	1	4	+	0	0	0	0
1.5-2	0	0	+	0	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

223

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	2	+	+	0	0	2
.5-1	22	17	5	1	1	+	2
1-1.5	5	10	7	2	+	+	1
1.5-2	1	2	3	1	1	+	+
2-2.5	+	+	+	1	+	+	+
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	+	0	0	+	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

2705

22

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	+	+	0	0	2
.5-1	25	18	6	2	1	+	2
1-1.5	5	9	6	2	1	1	1
1.5-2	+	2	2	1	+	+	+
2-2.5	+	+	+	+	0	+	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1425

23

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	1	1	1	0	0	3
.5-1	27	15	5	1	+	+	1
1-1.5	4	10	5	2	2	+	1
1.5-2	1	2	2	2	1	+	+
2-2.5	+	+	1	+	+	+	+
2.5-3	+	+	+	+	+	+	+
3-3.5	0	0	+	+	+	0	0
3.5-4	0	0	0	+	+	0	0
≥4	0	0	0	0	0	1	+

1033

24

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	0	+	0	0	3
.5-1	26	17	6	1	+	+	2
1-1.5	5	9	8	2	1	+	1
1.5-2	1	2	2	1	+	+	+
2-2.5	0	+	+	+	0	0	0
2.5-3	0	+	0	+	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1125

25

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	15	2	1	+	0	0	2
.5-1	26	16	5	2	1	+	1
1-1.5	5	8	6	2	1	+	1
1.5-2	+	1	1	1	+	0	0
2-2.5	+	+	+	+	+	0	+
2.5-3	0	0	0	0	+	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1248

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	0	0	0	0	0	3
.5-1	3	1	+	0	0	0	2
1-1.5	6	2	+	+	+	+	1
1.5-2	1	1	+	+	+	+	+
2-2.5	+	+	+	+	+	+	+
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1623

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	17	2	1	0	0	0	3
.5-1	27	19	5	1	1	+	4
1-1.5	3	6	3	1	1	1	1
1.5-2	+	+	1	+	+	0	+
2-2.5	+	+	+	+	+	0	0
2.5-3	0	0	+	+	0	0	0
3-3.5	0	0	0	0	0	0	+
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1042

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	2	+	+	0	0	1
.5-1	28	21	6	1	1	+	2
1-1.5	6	8	6	2	+	+	+
1.5-2	+	1	+	+	+	0	+
2-2.5	+	+	+	+	+	0	0
2.5-3	0	0	0	0	0	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1244

32

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	1	+	+	0	0	2
.5-1	29	19	7	2	+	+	2
1-1.5	6	10	6	2	1	+	+
1.5-2	+	1	1	+	+	0	+
2-2.5	+	+	+	+	+	0	0
2.5-3	0	+	0	+	+	0	0
3-3.5	0	0	0	0	+	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

3708

33

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	+	+	0	0	3
.5-1	25	24	6	1	+	0	5
1-1.5	5	9	5	1	+	+	2
1.5-2	+	1	1	+	0	0	0
2-2.5	+	+	0	+	0	+	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1484

34

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	22	1	+	+	0	0	2
.5-1	27	17	3	1	+	+	1
1-1.5	4	9	6	2	+	+	+
1.5-2	+	1	1	1	+	+	+
2-2.5	+	+	+	+	+	+	+
2.5-3	0	+	0	+	+	+	+
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

3888

35

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	26	3	1	+	0	0	4
.5-1	26	17	3	1	+	0	1
1-1.5	2	4	5	1	+	+	+
1.5-2	+	1	1	1	+	+	+
2-2.5	+	+	+	+	+	0	+
2.5-3	0	0	0	+	+	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

3736

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	1	0	0	0	0	3
.5-1	6	4	1	0	0	0	0
1-1.5	5	1	0	0	0	0	0
1.5-2	1	1	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

153

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	1	+	1	0	0	2
.5-1	37	19	6	2	0	0	1
1-1.5	4	7	4	2	+	0	+
1.5-2	0	0	+	0	0	0	+
2-2.5	0	+	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

446

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	0	0	0	0	0	0
.5-1	17	26	8	1	1	0	1
1-1.5	11	20	7	1	0	0	0
1.5-2	0	3	3	0	0	0	0
2-2.5	0	0	1	1	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

142

42

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	1	+	1	0	0	1
.5-1	30	19	7	2	1	0	2
1-1.5	4	9	7	2	1	+	1
1.5-2	0	1	1	+	0	0	0
2-2.5	0	0	0	+	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

655

43

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	18	2	1	+	0	0	5
.5-1	29	15	7	3	+	+	3
1-1.5	3	5	4	1	1	+	1
1.5-2	+	1	1	+	0	0	0
2-2.5	+	0	+	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

701

44

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	36	2	+	+	0	0	9
.5-1	27	14	3	0	1	+	2
1-1.5	1	3	2	+	+	+	+
1.5-2	0	+	+	+	+	0	0
2-2.5	+	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

1632

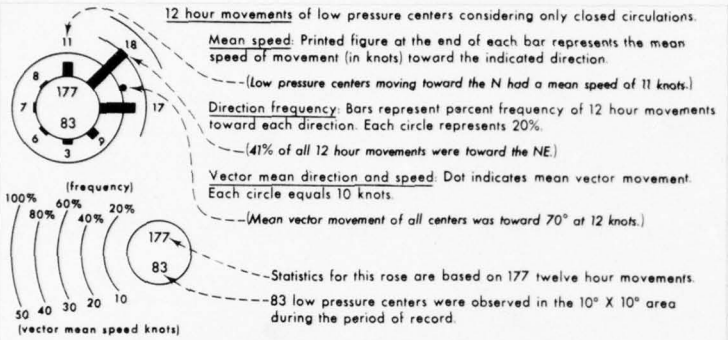
45

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	35	2	0	0	0	0	24
.5-1	24	12	0	0	0	0	0
1-1.5	0	0	2	0	0	0	0
1.5-2	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
≥4	0	0	0	0	0	0	0

48

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JUNE



12 hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.

---(*Low pressure centers moving toward the N had a mean speed of 11 knots.*)

Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.

---(*41% of all 12 hour movements were toward the NE.*)

Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.

---(*Mean vector movement of all centers was toward 70° at 12 knots.*)

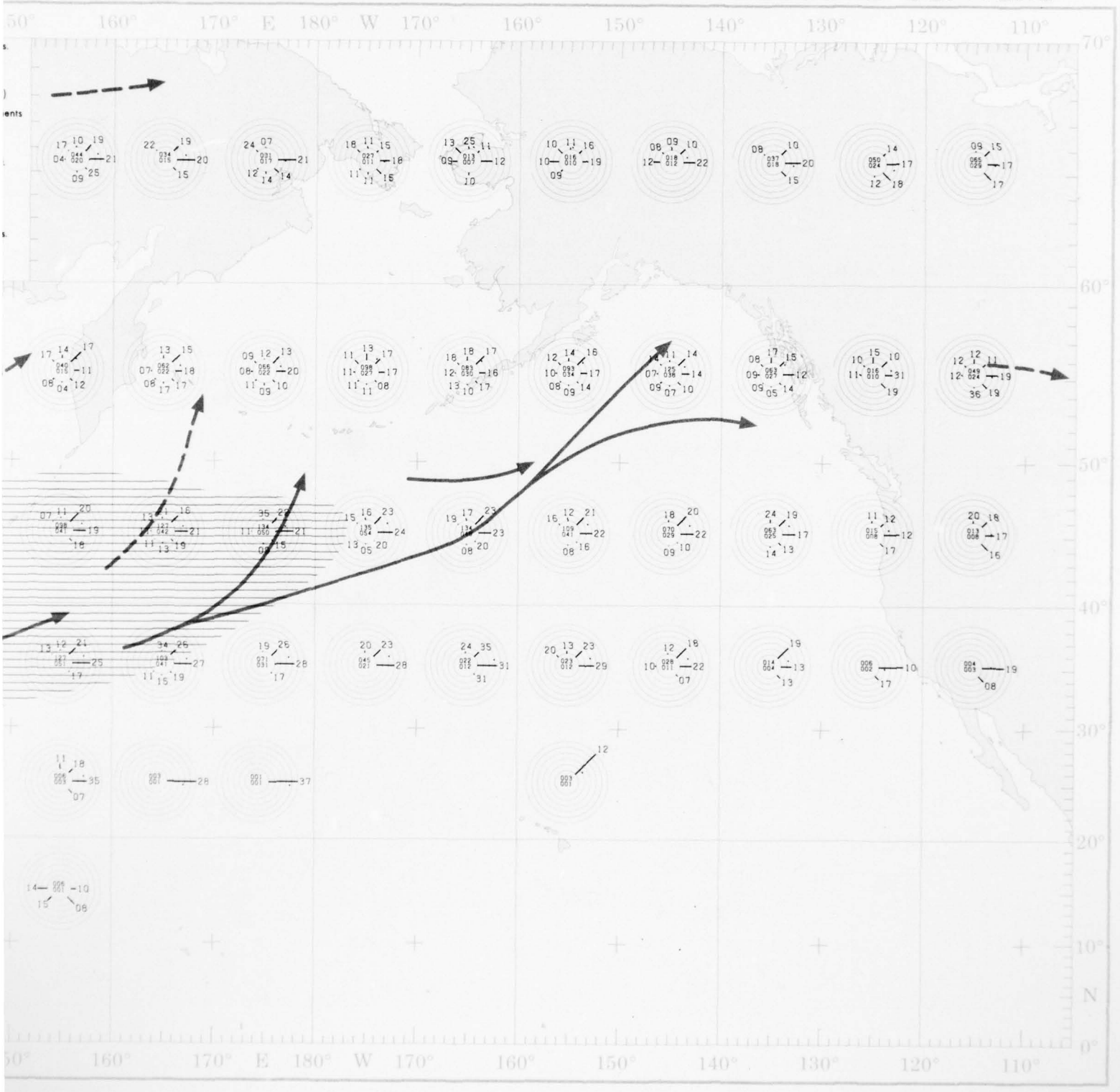
---Statistics for this rose are based on 177 twelve hour movements.

---83 low pressure centers were observed in the 10° X 10° area during the period of record.

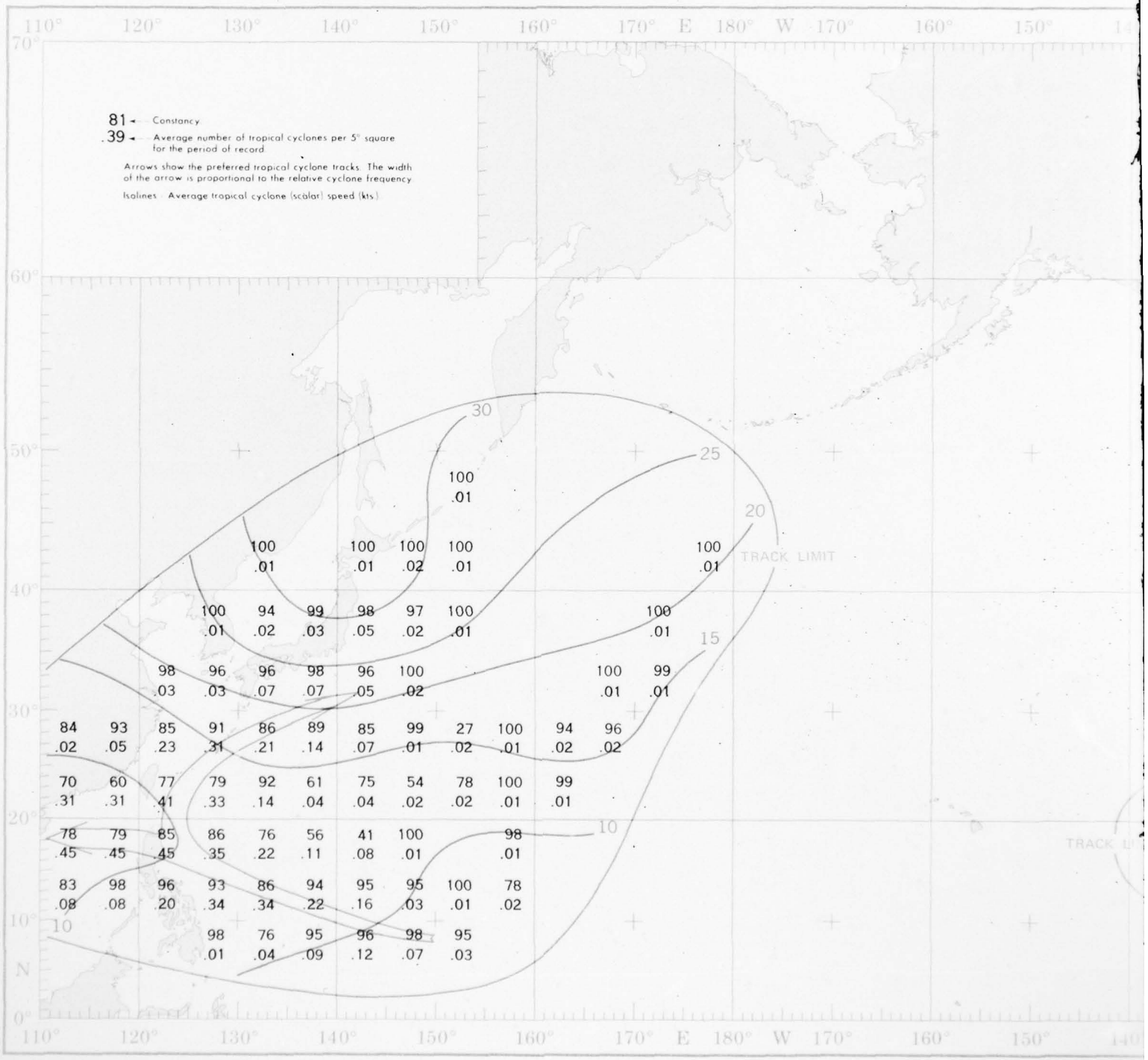
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)

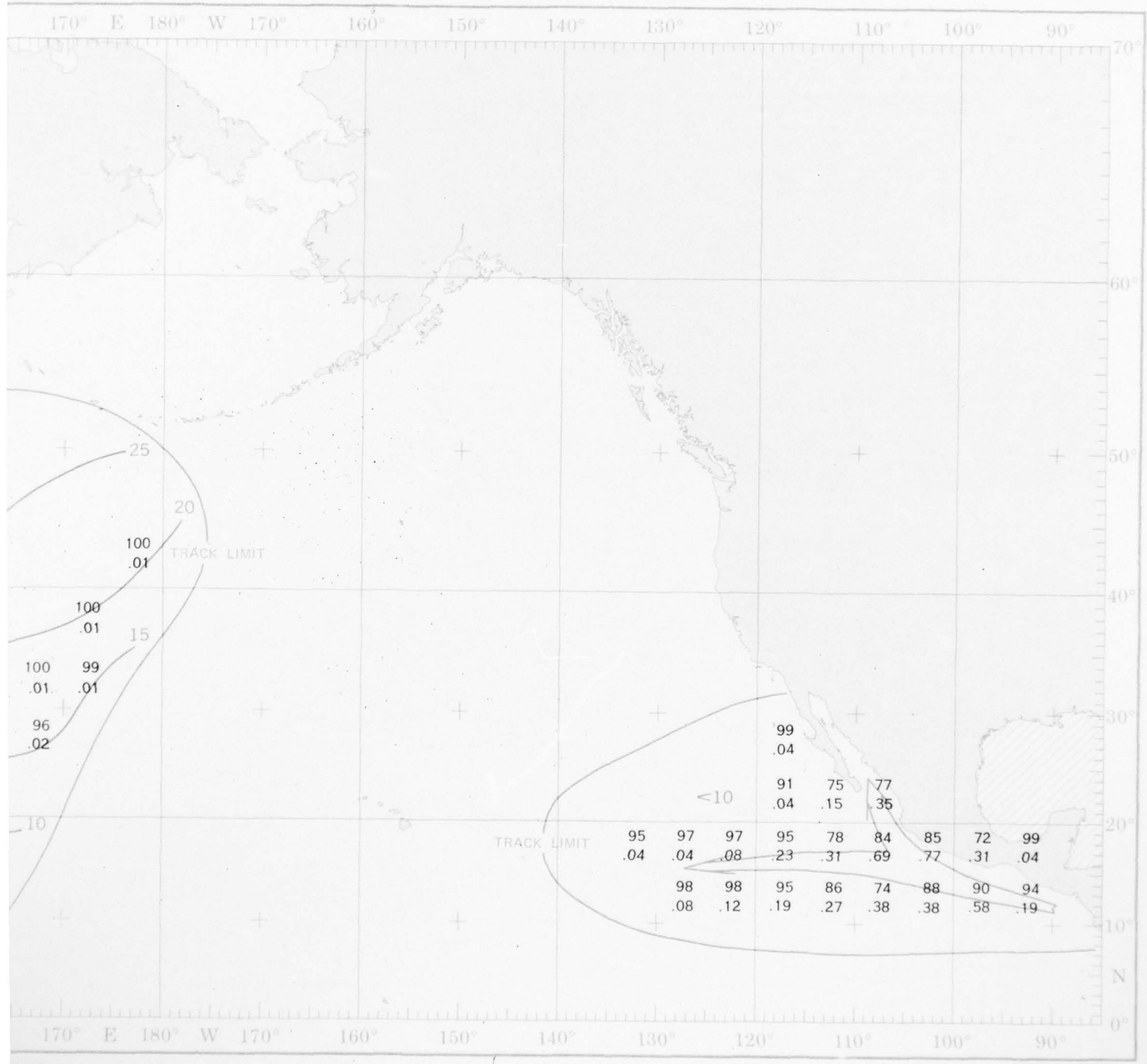
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

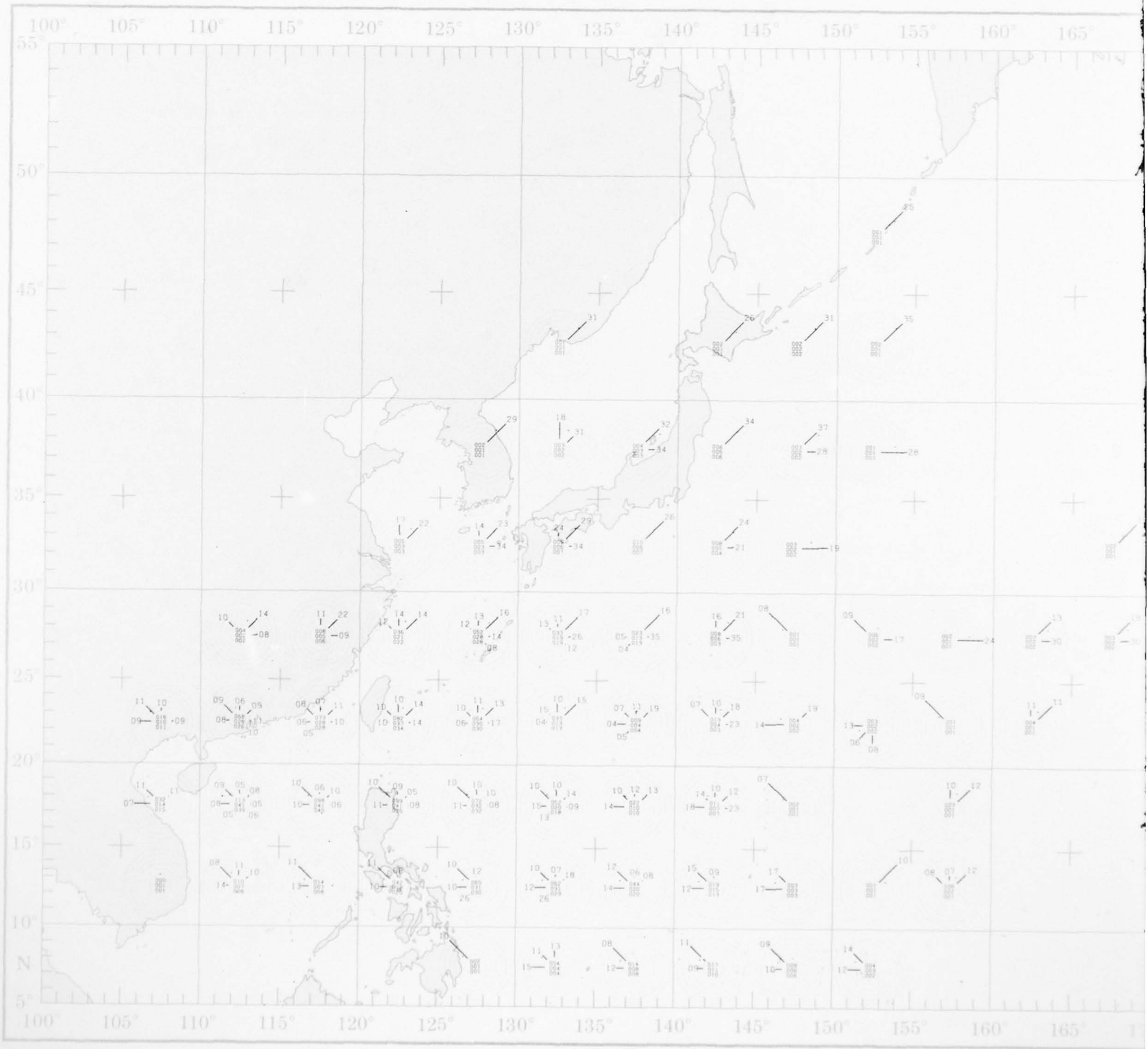


TROPICAL CYCLONE CHARACTERISTICS

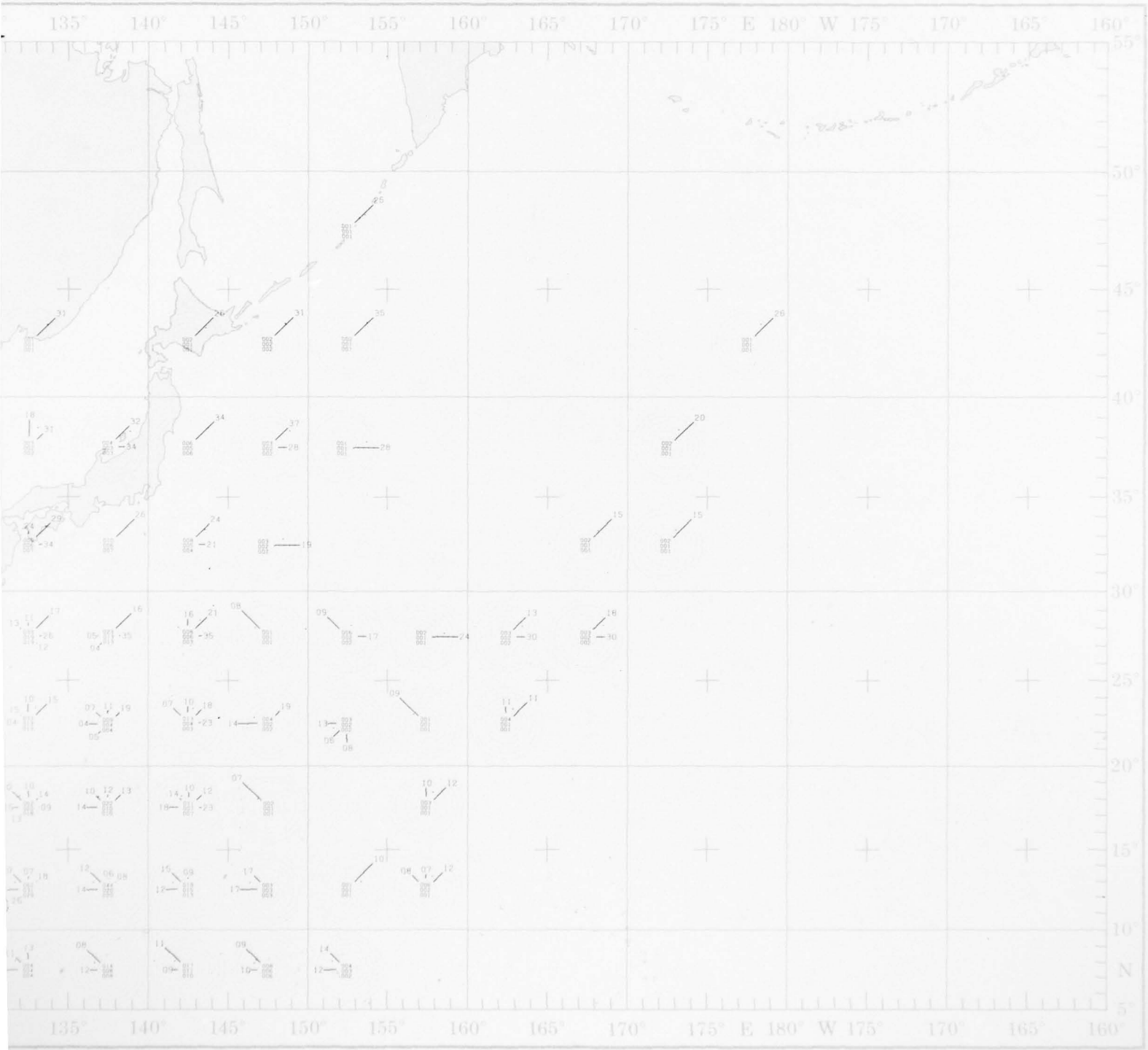



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
25
20
15
10
100
.01
TRACK LIMIT
100
.01
100
.01
99
.01
96
.02
99
.04
91
.04
75
.15
77
.35
<10
TRACK LIMIT
95 97 97 95 78 84 85 72 99
.04 .04 .08 .23 .31 .69 .77 .31 .04
98 98 95 86 74 88 90 94
.08 .12 .19 .27 .38 .38 .58 .19

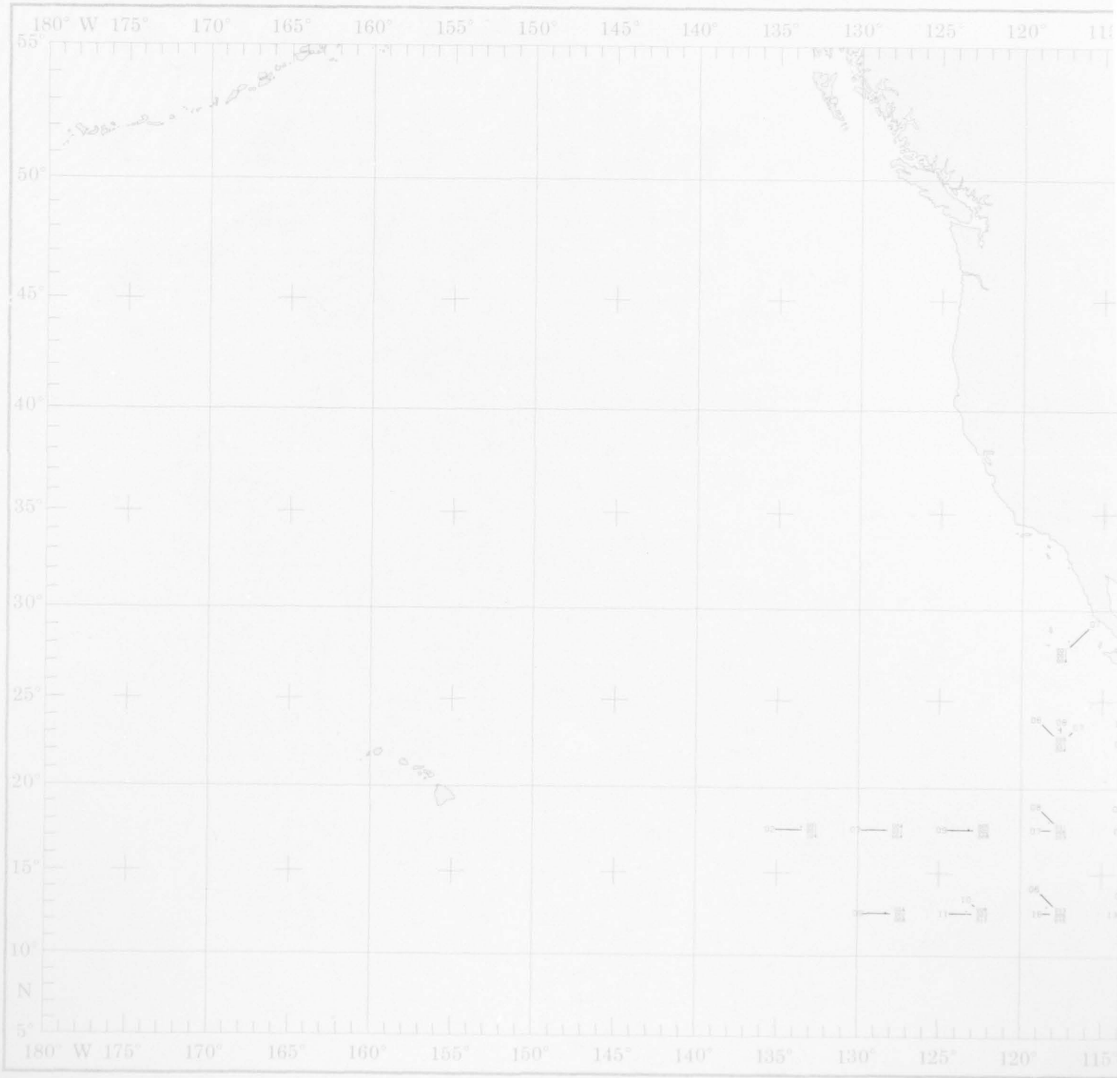
JUNE


100°
105°
110°
115°
120°
125°
130°
135°
140°
145°
150°
155°
160°
165°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
N
5°

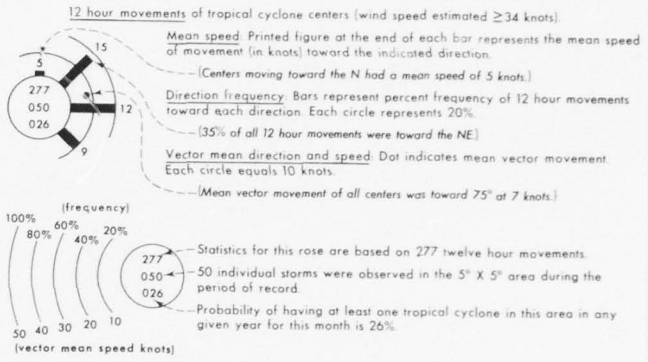
TROPICAL CYCLONE



TROPICAL CYCLONE

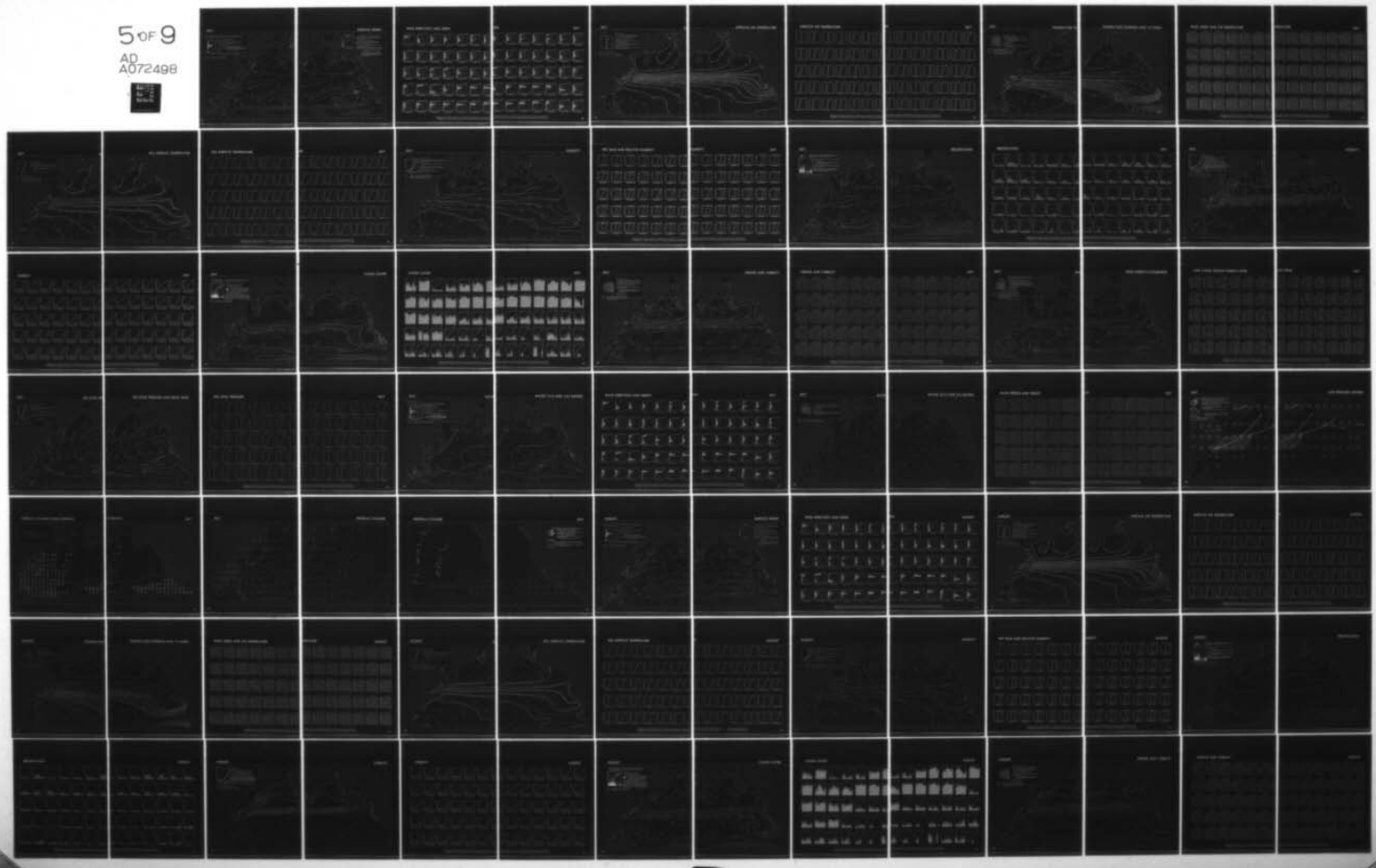


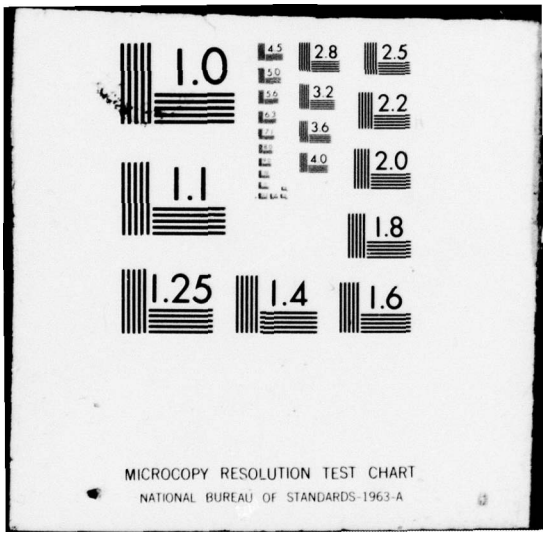
JUNE


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

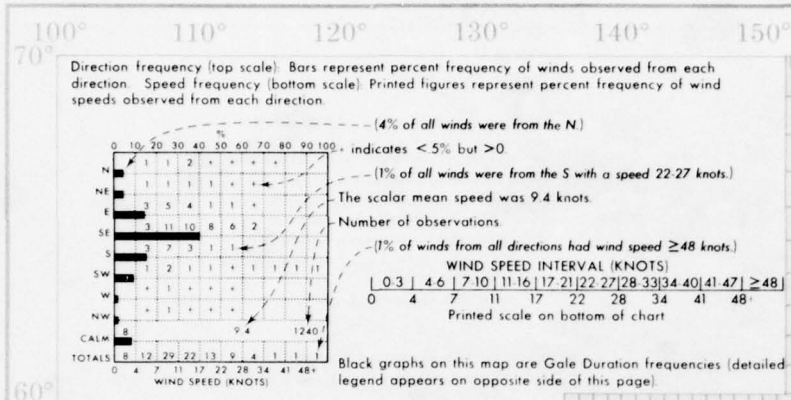
AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
MAR 77
UNCLASSIFIED NAVAIR-50-1C-529 NL

5 OF 9
AD
A072498




1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

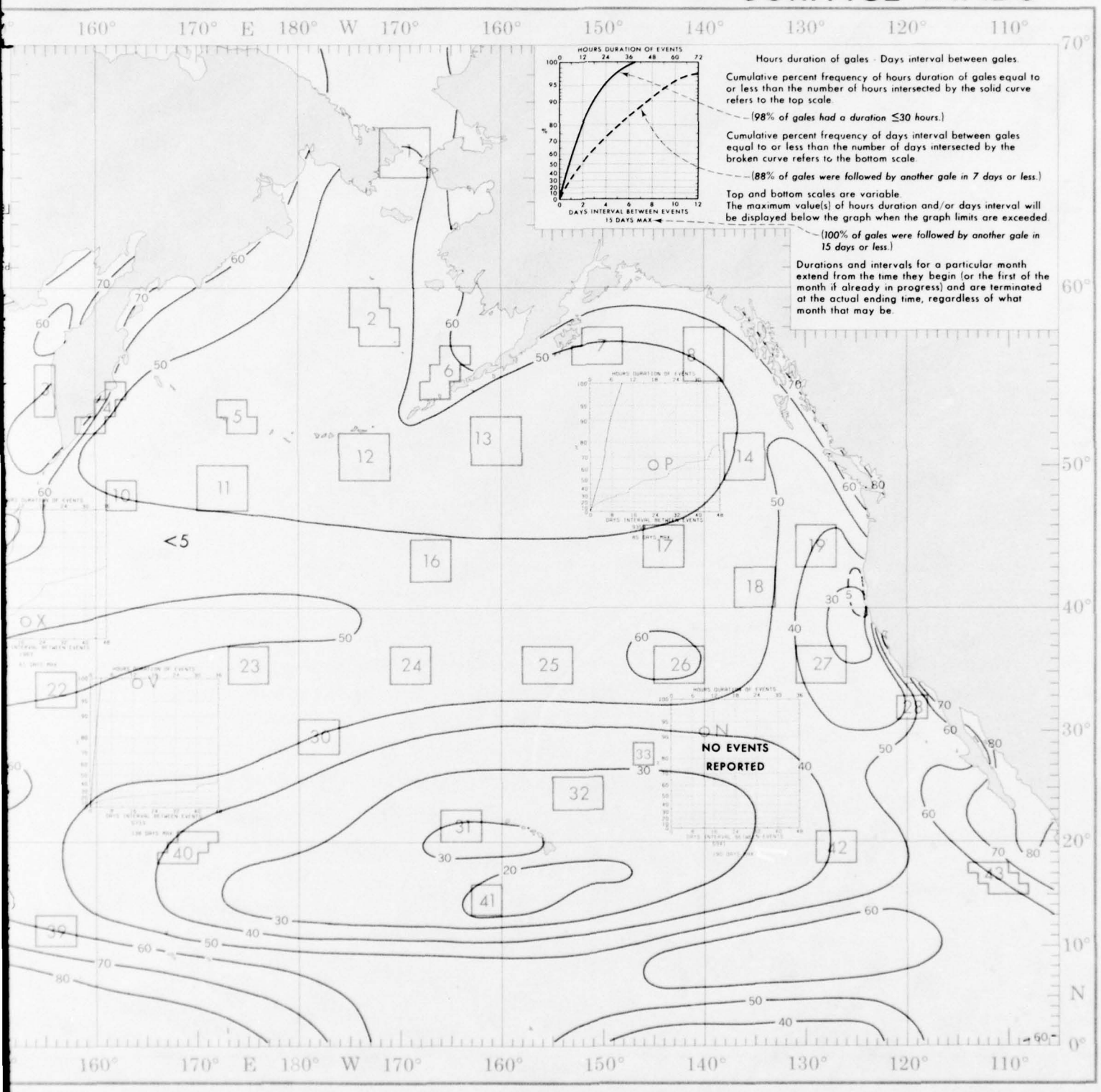
JULY



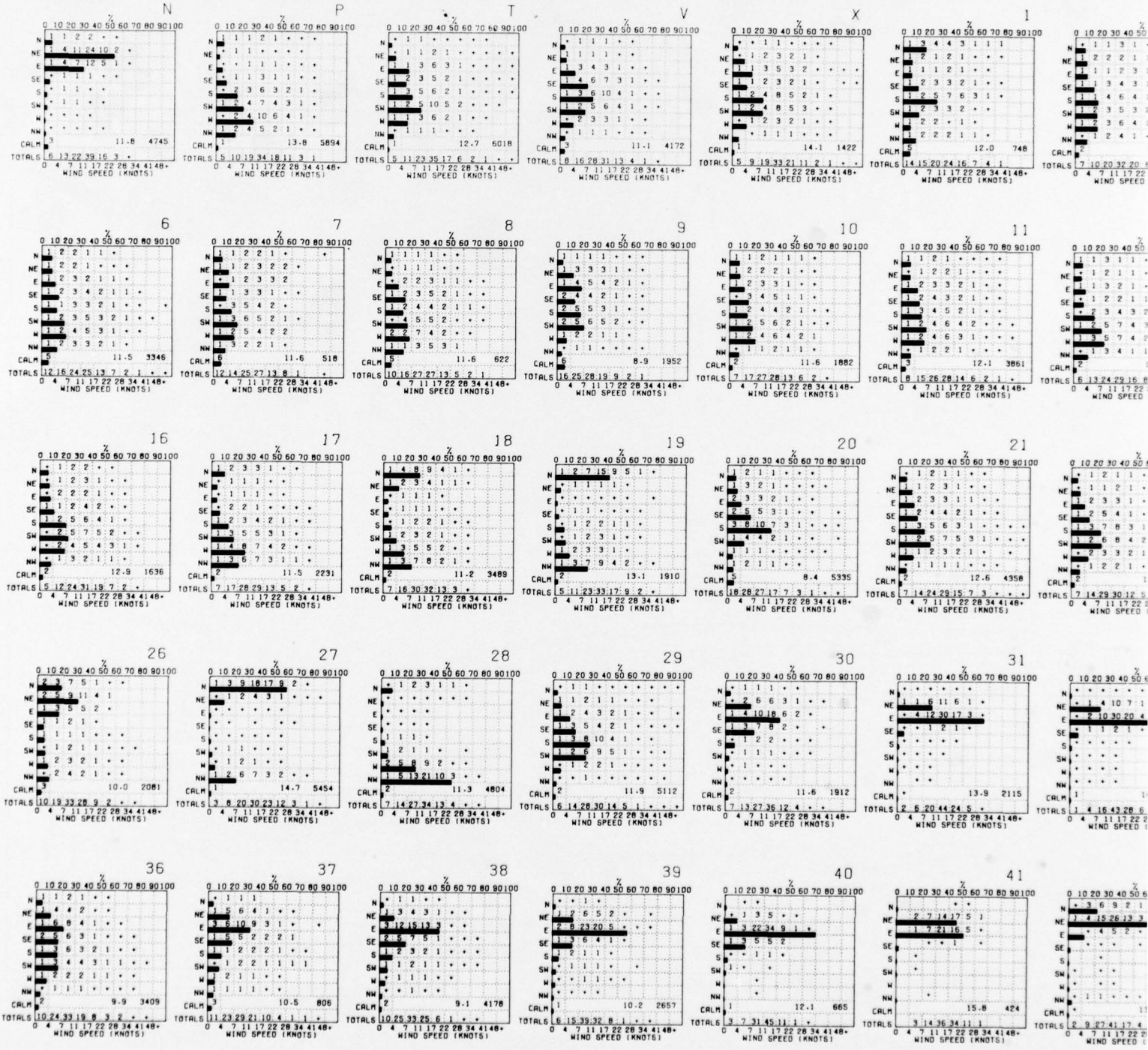
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).

BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots

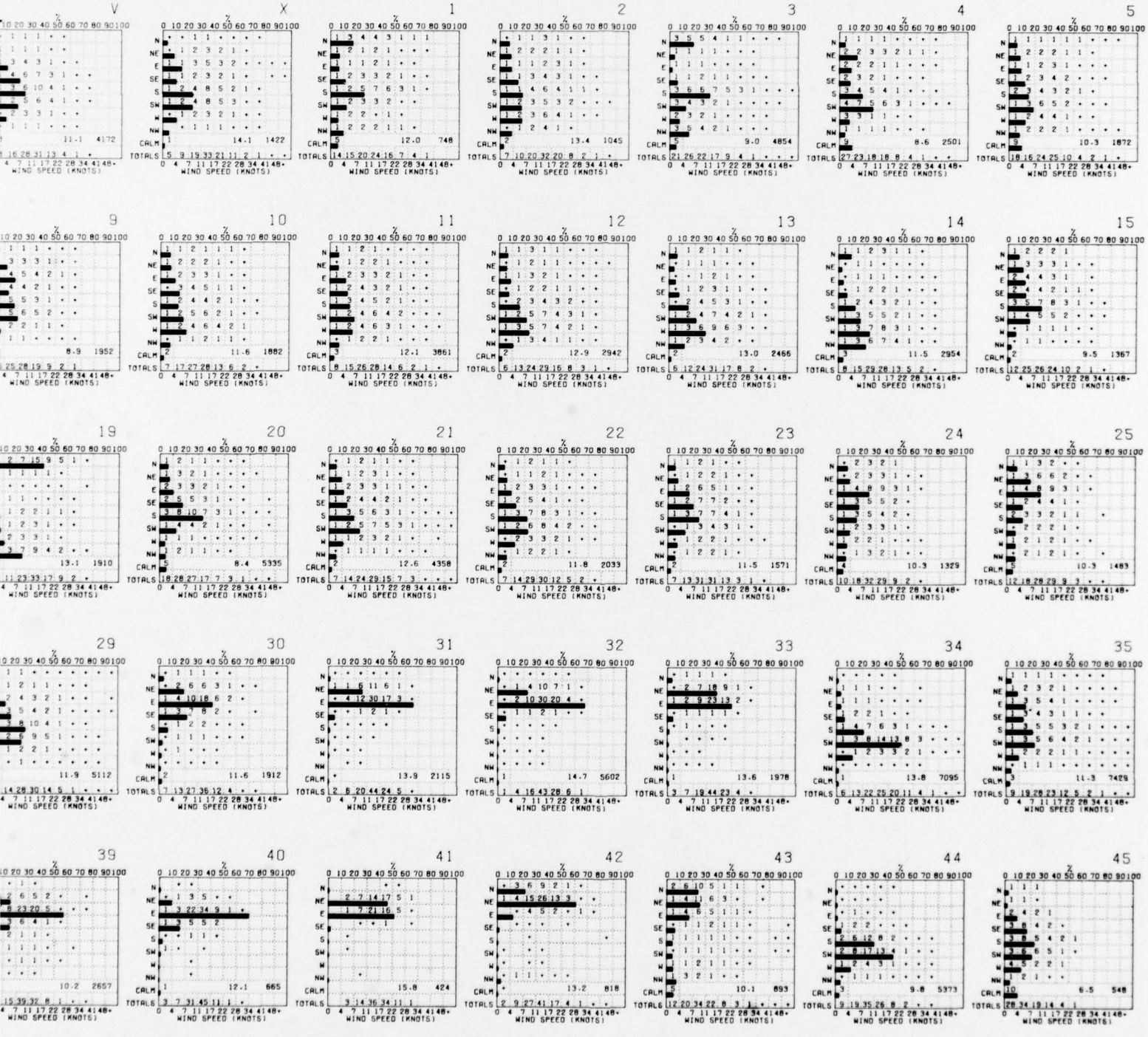
SURFACE WINDS



WIND DIRECTION AND SPEED

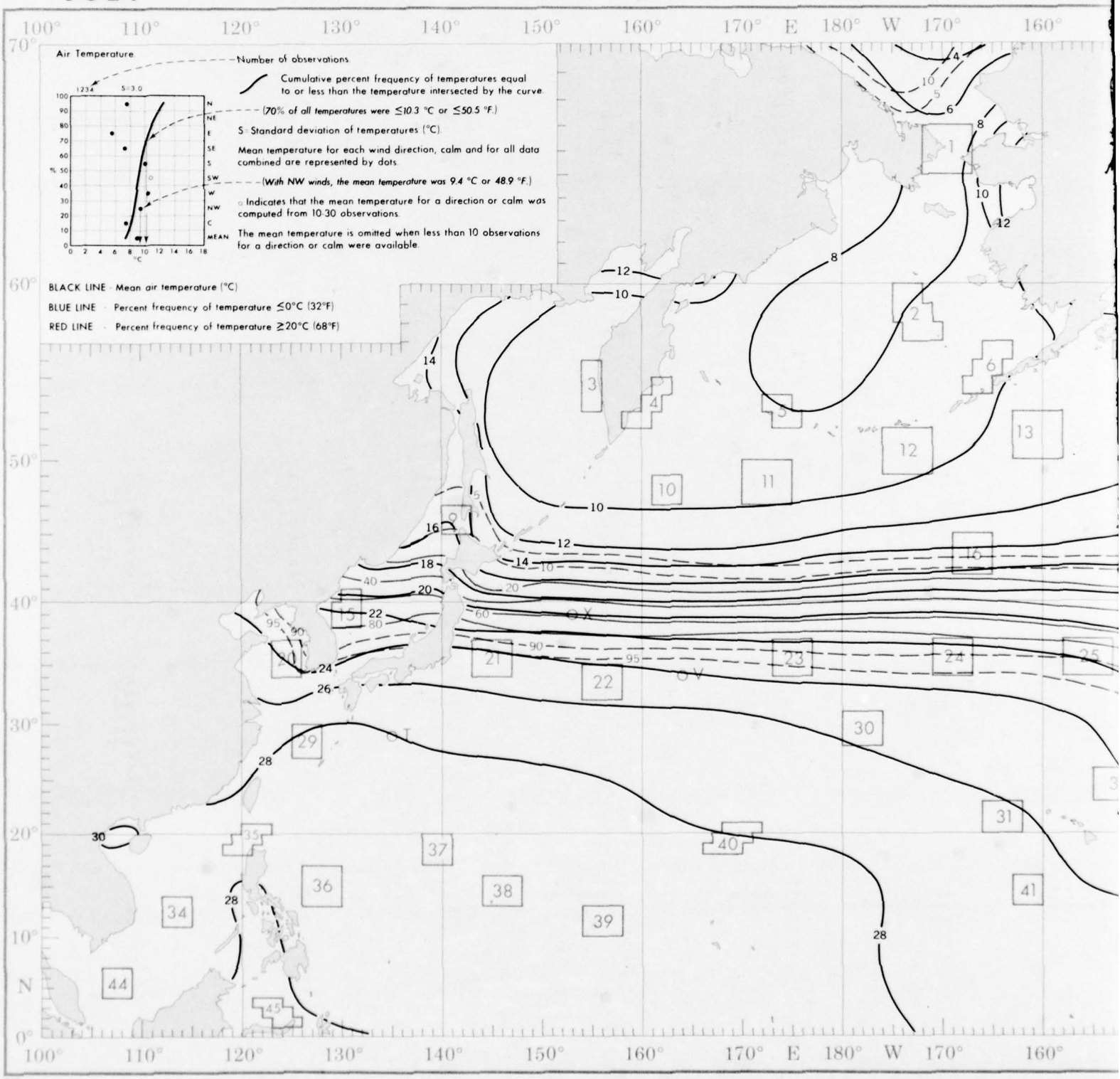


Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

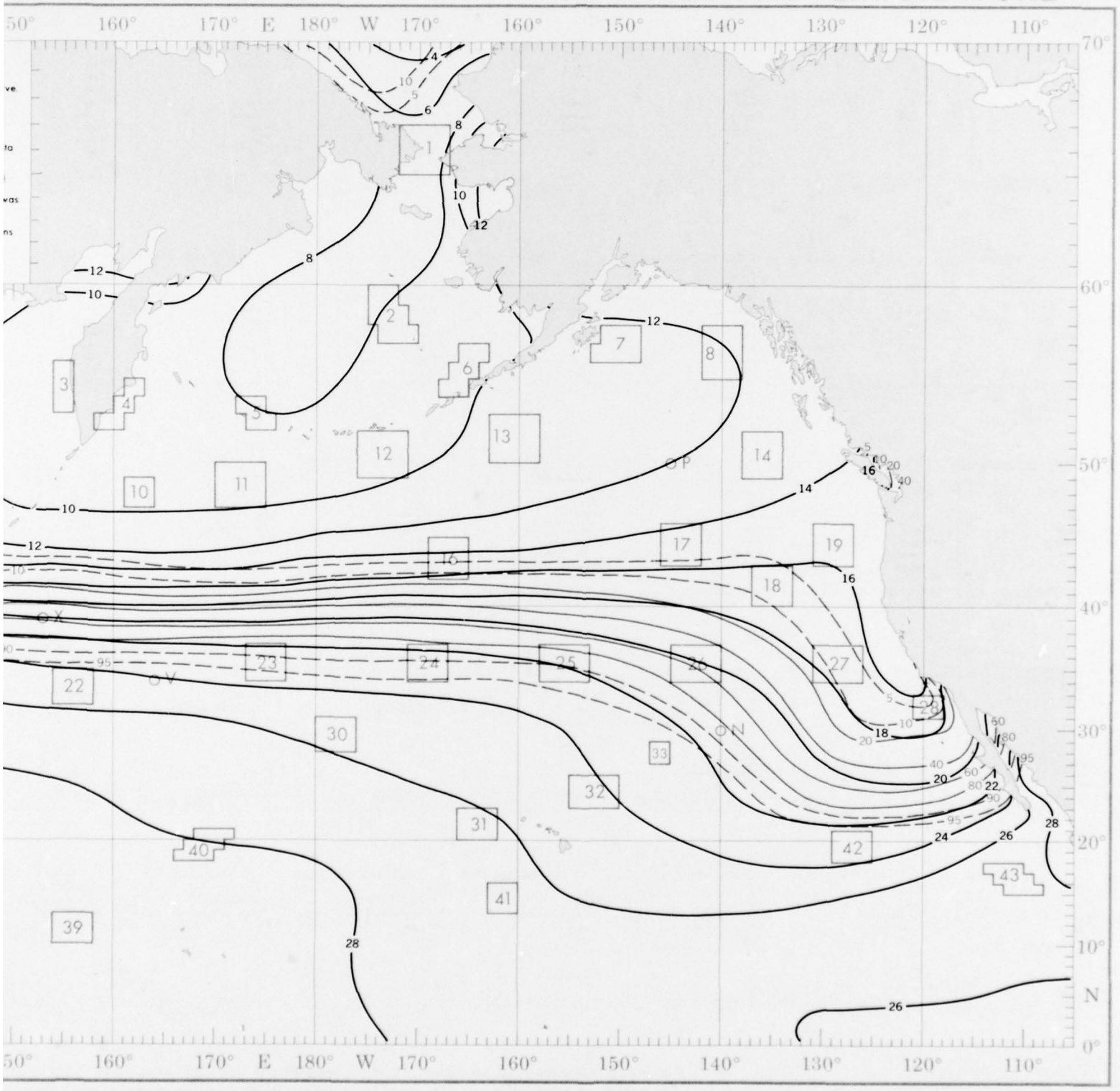


nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

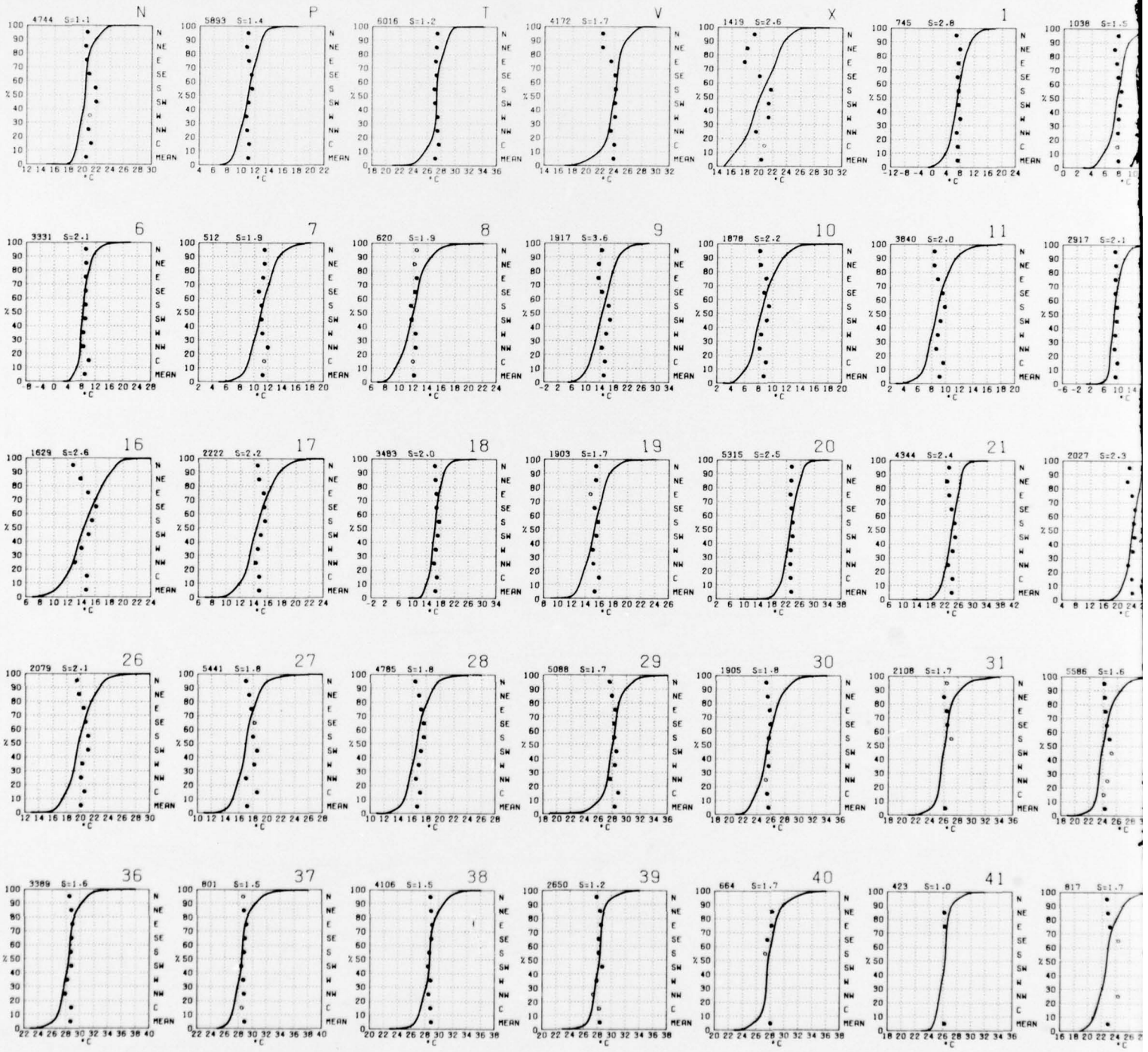
JULY


Air Temperature
Number of observations
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
%
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160°
70°
60°
50°
40°
30°
20°
10°
0°
N

SURFACE AIR TEMPERATURE

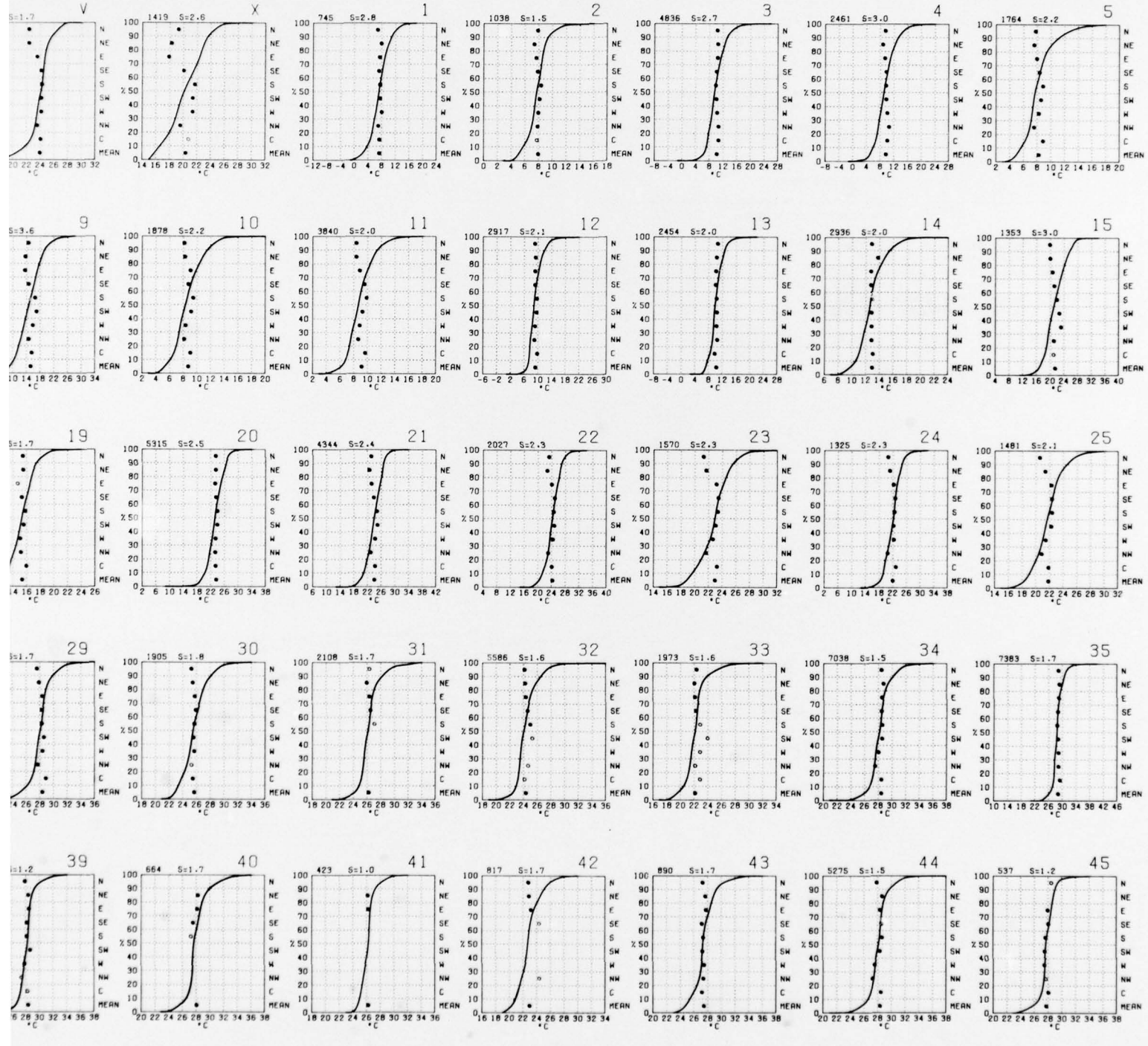


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

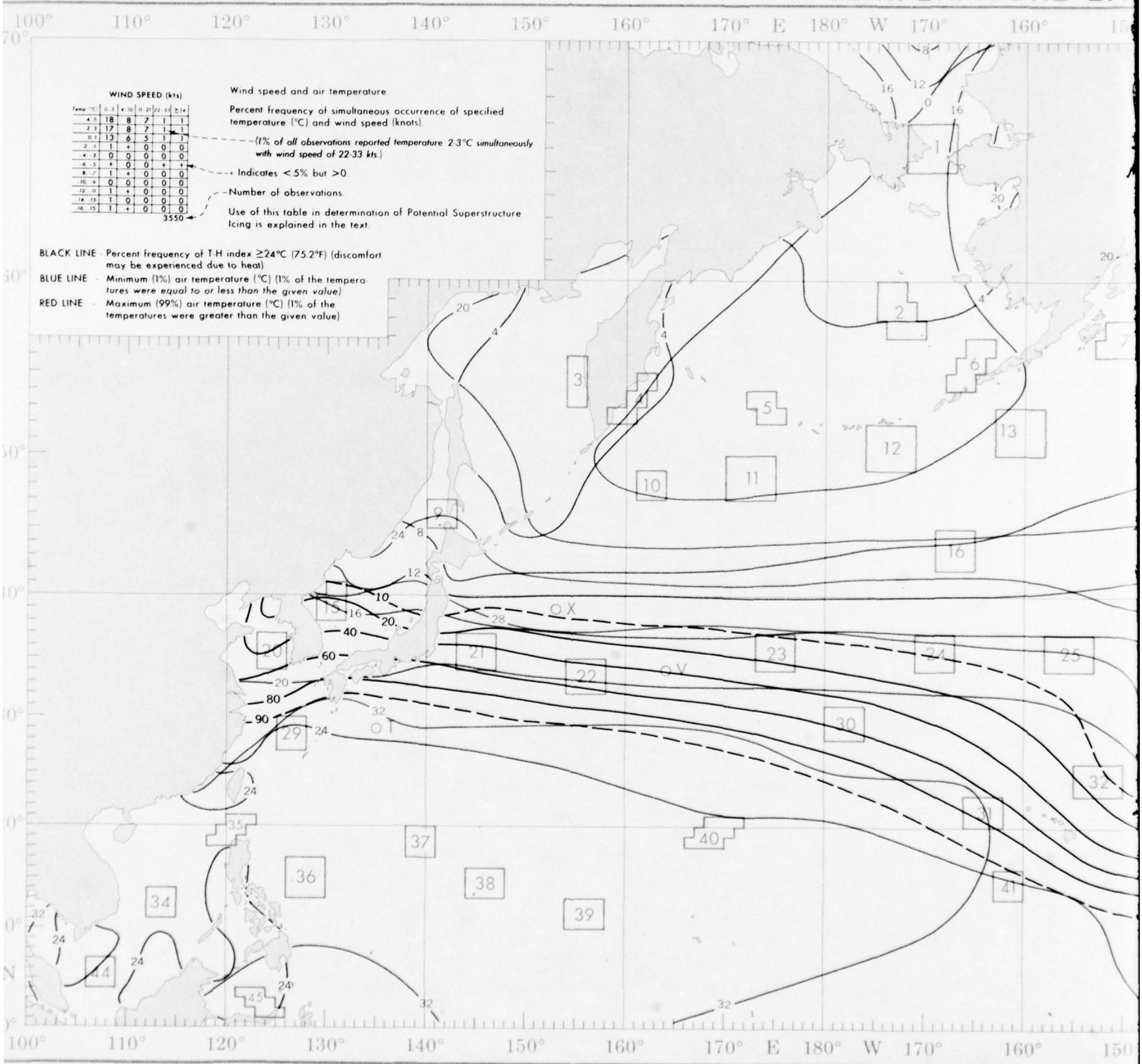
JULY



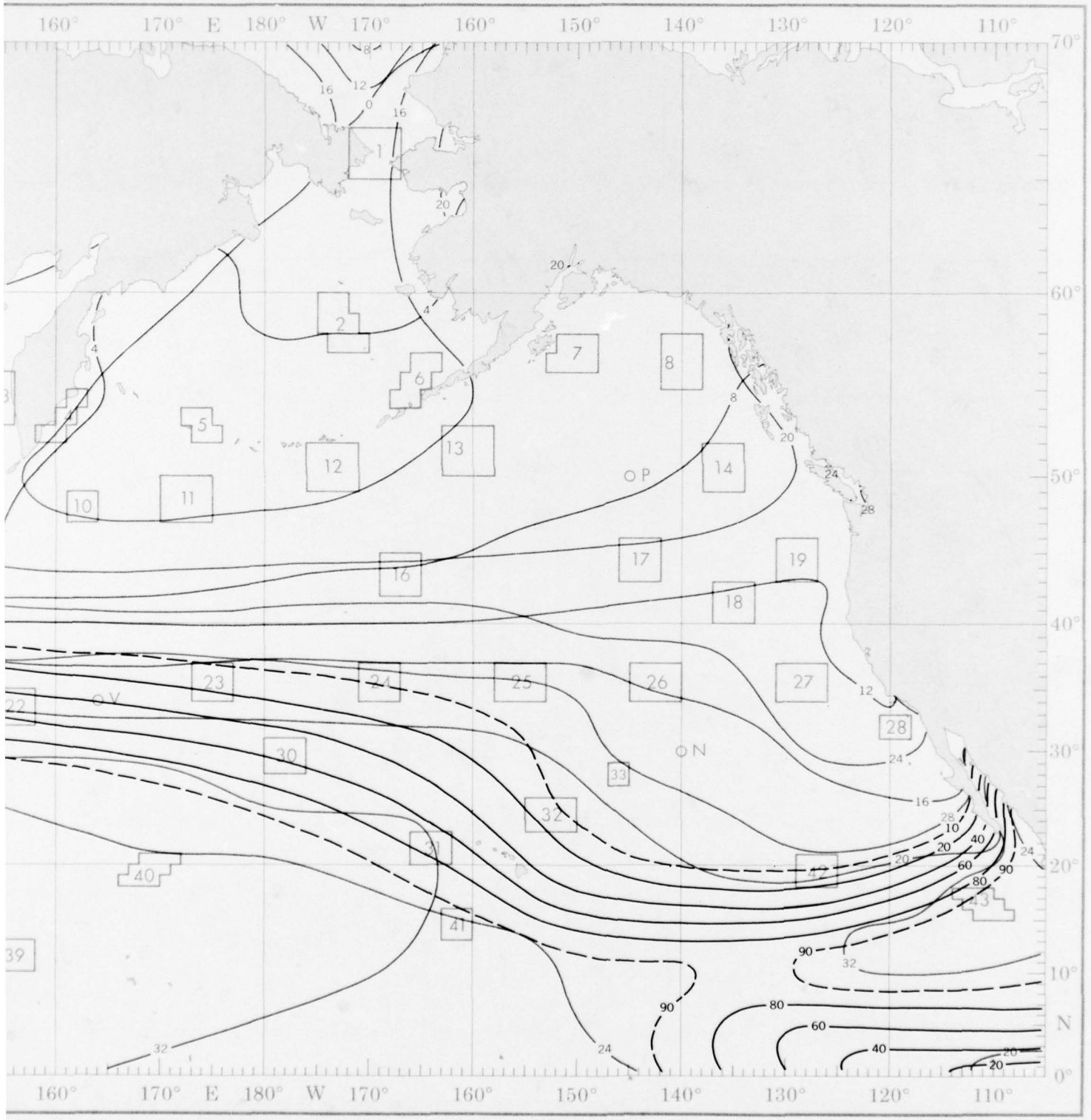
the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

TEMPERATURE EX



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	1	1	+	+	0
22.23	2	7	7	1	0
20.21	3	22	38	2	0
18.19	1	5	9	+	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4744

P

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	0	+	0
14.15	+	1	2	1	0
12.13	2	10	17	5	+
10.11	2	13	25	7	+
8.9	1	4	8	1	+
6.7	0	+	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

5893

T

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	+
28.29	3	17	24	2	+
26.27	2	15	25	4	+
24.25	+	1	3	1	+
22.23	+	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

6016

V

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	+	+	0	0
26.27	2	9	7	1	0
24.25	3	21	23	2	+
22.23	2	10	11	1	+
20.21	+	3	2	+	0
18.19	+	1	1	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4172

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	1	+	+	+
24.25	+	3	3	1	0
22.23	1	7	16	1	+
20.21	1	7	15	5	+
18.19	1	5	11	3	+
16.17	+	2	7	3	+
14.15	0	1	2	0	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1419

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	0	+	+	0
14.15	+	1	+	0	0
12.13	1	3	2	+	0
10.11	2	7	4	+	+
8.9	3	9	12	3	+
6.7	3	8	12	4	0
4.5	2	5	6	2	+
2.3	1	2	2	1	0
0.1	+	1	1	0	+
-2.-1	0	+	0	0	0
-4.-3	0	0	0	0	0

745

WIND SP

TEMP (°C)	0-3	4-
14.15	0	
12.13	+	
10.11	1	
8.9	3	
6.7	2	
4.5	+	
2.3	0	
0.1	0	
-2.-1	0	
-4.-3	0	
-6.-5	0	

6

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	+	0	0	0
18.19	+	+	0	0	0
16.17	1	+	+	0	0
14.15	1	1	+	+	0
12.13	2	3	1	+	0
10.11	4	11	9	2	+
8.9	3	15	17	5	+
6.7	2	8	9	2	+
4.5	+	1	1	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

3331

7

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	1	1	2	+	0
14.15	2	4	3	1	0
12.13	4	14	11	4	0
10.11	4	16	16	3	0
8.9	2	5	7	1	+
6.7	+	+	1	+	0
4.5	0	0	+	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

512

8

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	0	0
18.19	+	+	+	0	0
16.17	+	3	2	+	0
14.15	2	7	5	1	0
12.13	5	18	17	4	+
10.11	2	11	13	1	+
8.9	1	2	3	1	0
6.7	0	0	+	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

620

9

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	0	1	+	+	0
24.25	+	1	+	0	0
22.23	1	1	+	+	0
20.21	1	4	2	+	0
18.19	3	9	4	-	0
16.17	3	12	5	+	0
14.15	3	11	5	1	0
12.13	3	9	5	1	0
10.11	1	5	3	+	0
≤9	1	2	2	+	0

1918

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	0	0	0
18.19	0	+	0	0	0
16.17	0	+	0	0	0
14.15	+	1	1	+	0
12.13	1	5	4	+	0
10.11	1	9	10	2	+
8.9	3	16	13	3	+
6.7	1	12	12	3	0
4.5	+	1	1	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1878

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	+	0
16.17	+	+	+	+	0
14.15	+	1	1	+	+
12.13	1	4	4	1	+
10.11	2	11	12	2	+
8.9	3	16	19	4	+
6.7	1	8	7	1	+
4.5	+	1	+	+	0
2.3	+	+	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

3840

WIND SPE

TEMP (°C)	0-3	4-
22.23	0	
20.21	0	
18.19	+	
16.17	+	
14.15	+	
12.13	1	
10.11	2	
8.9	3	
6.7	1	
4.5	+	
2.3	0	

16

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	+	1	2	+	0
18.19	+	4	7	1	0
16.17	2	8	11	2	+
14.15	2	9	13	2	+
12.13	1	9	11	3	+
10.11	+	3	4	1	0
8.9	0	1	1	+	0
6.7	0	+	+	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1629

17

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	+	0	0
20.21	+	1	1	0	0
18.19	1	5	3	+	0
16.17	1	13	10	1	0
14.15	2	15	15	2	+
12.13	1	10	10	2	+
10.11	+	1	2	1	+
8.9	+	+	+	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2223

18

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	0	0	0
24.25	0	+	+	0	0
22.23	+	1	+	0	0
20.21	1	3	2	+	0
18.19	2	11	9	+	0
16.17	3	18	22	2	0
14.15	1	10	10	1	0
12.13	+	2	2	+	0
10.11	0	+	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

3486

19

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	0	0	+	0	0
20.21	+	1	+	0	0
18.19	1	4	3	1	0
16.17	2	14	21	5	+
14.15	2	11	19	3	+
12.13	+	5	6	1	0
10.11	0	+	1	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1903

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	+	0
30.31	+	+	+	0	0
28.29	1	3	1	+	0
26.27	3	10	5	1	0
24.25	4	14	7	1	+
22.23	6	17	7	1	+
20.21	3	7	2	+	+
18.19	1	2	1	+	0
16.17	+	+	+	+	0
14.15	0	+	+	+	0
≤13	0	+	+	0	0

5315

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	0	+	0	0
30.31	+	+	+	+	0
28.29	1	2	3	+	0
26.27	2	8	12	2	+
24.25	2	10	13	3	+
22.23	2	11	11	2	+
20.21	1	4	5	1	+
18.19	+	1	1	+	0
16.17	0	+	+	+	0
14.15	0	+	0	0	0

4346

WIND SPE

TEMP (°C)	0-3	4-
32.33	0	
30.31	+	
28.29	+	
26.27	2	
24.25	2	
22.23	2	
20.21	+	
18.19	+	
16.17	+	
14.15	0	
12.13	0	

26

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	+	+	0	0
24.25	+	3	1	0	0
22.23	2	9	5	+	0
20.21	4	19	12	1	0
18.19	3	16	14	1	+
16.17	+	4	3	+	0
14.15	0	+	+	0	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

2089

27

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	+	+	+	0	0
22.23	+	1	+	+	0
20.21	+	3	3	+	+
18.19	1	9	16	3	+
16.17	1	12	27	8	+
14.15	+	2	7	3	+
12.13	+	+	1	+	+
10.11	0	0	0	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

5442

28

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	+	+	+	0
20.21	+	3	2	+	0
18.19	2	11	10	1	0
16.17	4	20	25	3	+
14.15	1	7	9	1	0
12.13	0	1	1	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

4787

29

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	+	+	+	0
34.35	+	+	+	0	0
32.33	+	2	1	+	0
30.31	1	7	6	1	+
28.29	3	23	26	4	+
26.27	1	10	9	1	+
24.25	+	1	1	+	+
22.23	+	+	+	+	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

5090

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	1	+	0	0
30.31	+	1	1	0	0
28.29	1	5	5	+	0
26.27	2	17	19	1	+
24.25	2	13	19	2	0
22.23	1	3	3	1	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1905

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	1	0	0
30.31	0	1	2	+	0
28.29	+	4	8	+	0
26.27	1	14	38	3	0
24.25	+	7	17	1	0
22.23	0	1	1	0	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2112

WIND SPE

TEMP (°C)	0-3	4-
34.35	0	
32.33	0	
30.31	0	
28.29	+	
26.27	+	
24.25	1	
22.23	+	
20.21	+	
18.19	0	
16.17	0	
14.15	0	

36

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	+	0
34.35	+	1	0	0	0
32.33	+	2	1	+	0
30.31	2	13	5	1	+
28.29	5	33	15	2	+
26.27	2	8	5	1	+
24.25	+	1	1	+	+
22.23	0	+	0	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3395

37

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	1	+	0	0
32.33	1	2	1	+	0
30.31	2	10	6	1	0
28.29	6	32	19	4	1
26.27	1	7	4	1	+
24.25	0	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

801

38

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	+	+	+	0	0
32.33	1	3	1	0	0
30.31	2	12	5	+	0
28.29	6	35	19	1	+
26.27	1	7	4	+	+
24.25	0	+	+	+	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

4108

39

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	1	1	0	0
30.31	1	5	3	0	0
28.29	3	39	29	1	0
26.27	2	8	6	+	+
24.25	+	+	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2650

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	0	1	3	+	0
30.31	+	5	6	0	0
28.29	1	19	25	1	0
26.27	2	13	20	+	0
24.25	+	1	1	+	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

664

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	3	5	2	0
26.27	0	12	54	9	0
24.25	+	2	10	1	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

423

WIND SPE

TEMP (°C)	0-3	4-
30.31	0	
28.29	0	
26.27	+	
24.25	+	
22.23	1	
20.21	0	
18.19	0	
16.17	0	
14.15	0	
12.13	0	
10.11	0	

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

MPERATURE

JULY

V

WIND SPEED (KTS)

(°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	+	+	0	0
26.27	2	9	7	1	0
24.25	3	21	23	2	+
22.23	2	10	11	1	+
20.21	+	3	2	+	0
18.19	+	1	1	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4172

X

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	1	+	+	+
24.25	+	3	3	1	0
22.23	1	7	16	1	+
20.21	1	7	15	5	+
18.19	1	5	11	3	+
16.17	+	2	7	3	+
14.15	0	1	2	0	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1419

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	0	+	+	0
14.15	+	1	+	0	0
12.13	1	3	2	+	0
10.11	2	7	4	+	+
8.9	3	9	12	3	+
6.7	3	8	12	4	0
4.5	2	5	6	2	+
2.3	1	2	2	1	0
0.1	+	1	1	0	+
-2.-1	0	+	0	0	0
-4.-3	0	0	0	0	0

745

2

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	+	0
12.13	+	1	+	+	+
10.11	1	4	7	2	+
8.9	3	13	25	4	0
6.7	2	12	18	4	+
4.5	+	1	2	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

1038

3

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	0	0	0
22.23	+	+	+	0	0
20.21	+	+	+	0	0
18.19	+	1	+	+	0
16.17	1	1	+	+	0
14.15	3	4	1	+	0
12.13	4	9	4	1	+
10.11	6	14	8	2	+
8.9	5	14	8	2	+
6.7	2	5	2	1	+
≤5	+	1	+	+	0

4836

4

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	0	0	0
22.23	+	0	+	0	0
20.21	+	+	+	0	0
18.19	+	1	+	+	0
16.17	1	1	+	+	0
14.15	2	3	1	+	0
12.13	5	6	3	+	0
10.11	7	11	7	1	0
8.9	7	12	8	1	+
6.7	3	7	5	2	+
≤5	1	2	1	+	+

2461

5

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	+	1	+	0	0
14.15	+	1	+	0	0
12.13	2	2	1	+	0
10.11	4	5	4	1	+
8.9	7	16	13	2	0
6.7	4	13	15	2	+
4.5	+	1	2	1	+
2.3	0	+	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1765

9

WIND SPEED (KTS)

(°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	0	1	+	+	0
24.25	+	1	+	0	0
22.23	1	1	+	+	0
20.21	1	4	2	+	0
18.19	3	9	4	+	0
16.17	3	12	5	+	0
14.15	3	11	5	1	0
12.13	3	9	5	1	0
10.11	1	5	3	+	0
≤9	1	2	2	+	0

1918

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	0	0	0
18.19	0	+	0	0	0
16.17	0	+	+	0	0
14.15	+	1	1	+	0
12.13	1	5	4	+	0
10.11	1	9	10	2	+
8.9	3	16	13	3	+
6.7	1	12	12	3	0
4.5	+	1	1	+	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1878

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	+	0
16.17	+	+	+	+	0
14.15	+	1	1	+	0
12.13	1	4	4	1	+
10.11	2	11	12	2	+
8.9	3	16	19	4	+
6.7	1	8	7	1	+
4.5	+	1	+	0	0
2.3	+	+	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

3840

12

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	0	0
20.21	0	+	+	+	0
18.19	+	+	+	+	0
16.17	+	+	+	0	0
14.15	+	1	1	+	0
12.13	1	4	5	1	+
10.11	2	10	13	2	+
8.9	3	16	21	5	+
6.7	1	5	5	2	+
4.5	+	+	+	0	0
2.3	0	0	+	0	0

2917

13

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	0	+	0
18.19	+	+	+	0	0
16.17	0	1	1	+	0
14.15	+	2	2	+	0
12.13	1	8	10	2	0
10.11	2	13	19	4	+
8.9	2	10	15	4	+
6.7	+	1	2	+	0
4.5	0	+	+	0	0
2.3	+	0	0	0	0
0.1	0	0	0	0	0

2456

14

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	0	0
20.21	+	+	+	0	0
18.19	+	2	1	+	0
16.17	1	5	3	+	0
14.15	2	10	8	1	0
12.13	4	19	20	3	+
10.11	1	7	8	2	+
8.9	+	1	1	+	+
6.7	0	0	0	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2938

15

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	0	+	0	0
28.29	+	1	1	0	0
26.27	1	3	5	1	0
24.25	1	7	7	1	0
22.23	3	11	6	+	+
20.21	4	14	7	+	+
18.19	2	12	6	+	0
16.17	1	3	2	+	0
14.15	+	+	+	0	0
≤13	+	+	+	0	0

1353

19

WIND SPEED (KTS)

(°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	0	0	+	0	0
20.21	+	1	+	0	0
18.19	1	4	3	1	0
16.17	2	14	21	5	+
14.15	2	11	19	3	+
12.13	+	5	6	1	0
10.11	0	+	1	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1903

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	+	0
30.31	+	+	+	0	0
28.29	1	3	1	+	0
26.27	3	10	5	1	0
24.25	4	14	7	1	+
22.23	6	17	7	1	+
20.21	3	7	2	+	+
18.19	1	2	1	+	0
16.17	+	+	+	+	0
14.15	0	+	+	+	0
≤13	0	+	+	0	0

5315

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	0	+	0	0
30.31	+	+	+	0	0
28.29	+	2	3	+	0
26.27	2	8	12	2	+
24.25	2	10	13	3	+
22.23	2	11	11	2	+
20.21	1	4	5	1	+
18.19	+	1	1	+	0
16.17	0	+	+	+	0
14.15	0	+	0	0	0

4346

22

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	1	+	0	0
28.29	+	3	2	+	0
26.27	2	13	10	1	+
24.25	2	13	15	2	+
22.23	2	9	10	2	0
20.21	+	4	3	+	+
18.19	+	+	1	+	0
16.17	+	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2027

23

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	+	+	0	0
28.29	+	1	+	0	0
26.27	1	5	4	+	0
24.25	2	11	13	1	0
22.23	2	17	17	1	0
20.21	1	7	6	1	+
18.19	+	3	3	1	0
16.17	+	1	1	0	0
14.15	0	0	+	0	0
12.13	0	0	0	0	0

1570

24

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	+	0	0
28.29	+	1	+	0	0
26.27	1	3	2	+	0
24.25	2	8	8	+	0
22.23	4	19	14	1	0
20.21	2	11	10	1	0
18.19	1	7	3	+	0
16.17	0	1	1	+	0
14.15	0	+	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1325

25

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	+	0	0
28.29	0	1	+	0	0
26.27	1	2	2	0	0
24.25	2	7	5	+	0
22.23	5	16	15	1	+
20.21	3	15	12	1	0
18.19	2	4	3	+	0
16.17	+	1	1	+	+
14.15	0	0	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1485

29

WIND SPEED (KTS)

(°C)	0-3	4-10	11-21	22-33	≥ 34
6.37	+	+	+	+	0
4.35	+	+	+	0	0
2.33	+	2	1	+	0
0.31	1	7	6	1	+
8.29	3	23	26	4	+
6.27	1	10	9	1	+
4.25	+	1	1	+	+
2.23	+	+	+	+	0
0.21	0	+	+	+	0
8.19	0	0	0	0	0
6.17	0	0	0	0	0

5090

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	1	+	0	0
30.31	+	1	1	0	0
28.29	1	5	5	+	0
26.27	2	17	19	1	+
24.25	2	13	19	2	0
22.23	1	3	3	1	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1905

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	1	0	0
30.31	0	1	2	+	0
28.29	+	4	8	+	0
26.27	1	14	38	3	0
24.25	+	7	17	1	0
22.23	0	1	1	0	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2112

32

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	+	+	0	0
30.31	0	+	1	+	0
28.29	+	+	3	0	0
26.27	+	4	12	1	0
24.25	1	10	33	3	0
22.23	+	6	22	2	0
20.21	+	+	1	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5587

33

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	0	0	0
28.29	+	+	1	0	0
26.27	+	1	2	+	0
24.25	+	3	6	+	0
22.23	2	13	37	2	0
20.21	1	7	19	1	0
18.19	0	+	2	+	0
16.17	0	0	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1973

34

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	0	+	+	+	0
32.33	+	2	1	+	0
30.31	1	6	8	2	+
28.29	3	19	27	9	+
26.27	1	6	8	3	+
24.25	+	1	1	+	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

7043

35

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	+	0	0	0
36.37	+	+	+	0	0
34.35	+	+	+	0	0
32.33	1	3	2	+	0
30.31	3	13	8	1	+
28.29	5	25	19	4	+
26.27	1	6	5	2	+
24.25	+	+	1	+	+
22.23	0	+	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0

7399

39

WIND SPEED (KTS)

(°C)	0-3	4-10	11-21	22-33	≥ 34
.35	0	+	0	0	0
.33	+	1	1	0	0
.31	1	5	3	0	0
.29	3	39	29	1	0
.27	2	8	6	+	+
.25	+	+	+	0	0
.23	0	0	0	0	0
.21	0	0	0	0	0
.19	0	0	0	0	0
.17	0	0	0	0	0
.15	0	0	0	0	0

2650

40

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	0	1	3	+	0
30.31	+	5	6	0	0
28.29	1	19	25	1	0
26.27	2	13	20	+	0
24.25	+	1	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

664

41

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	3	5	2	0
26.27	0	12	54	9	0
24.25	0	2	10	1	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

423

42

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	1	+	0	0
26.27	+	3	4	+	0
24.25	+	8	14	1	+
22.23	1	17	28	2	+
20.21	0	6	11	2	0
18.19	0	+	+	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

817

43

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	0	0	0
32.33	+	1	+	0	0
30.31	2	4	2	0	0
28.29	4	24	10	1	0
26.27	5	21	15	2	+
24.25	1	2	2	1	0
22.23	0	+	+	+	+
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

892

44

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	+	+	+	0	0
32.33	+	2	1	+	0
30.31	1	8	5	+	0
28.29	6	34	20	1	+
26.27	2	10	7	1	+
24.25	+	1	1	+	0
22.23	0	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

5278

45

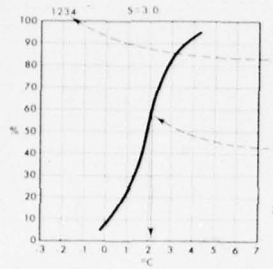
WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	2	2	+	0	0
28.29	19	34	8	+	0
26.27	7	17	6	1	0
24.25	+	1	2	0	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

538

esent the objective compilation of available data for specified areas without regard to suspected biases.
analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

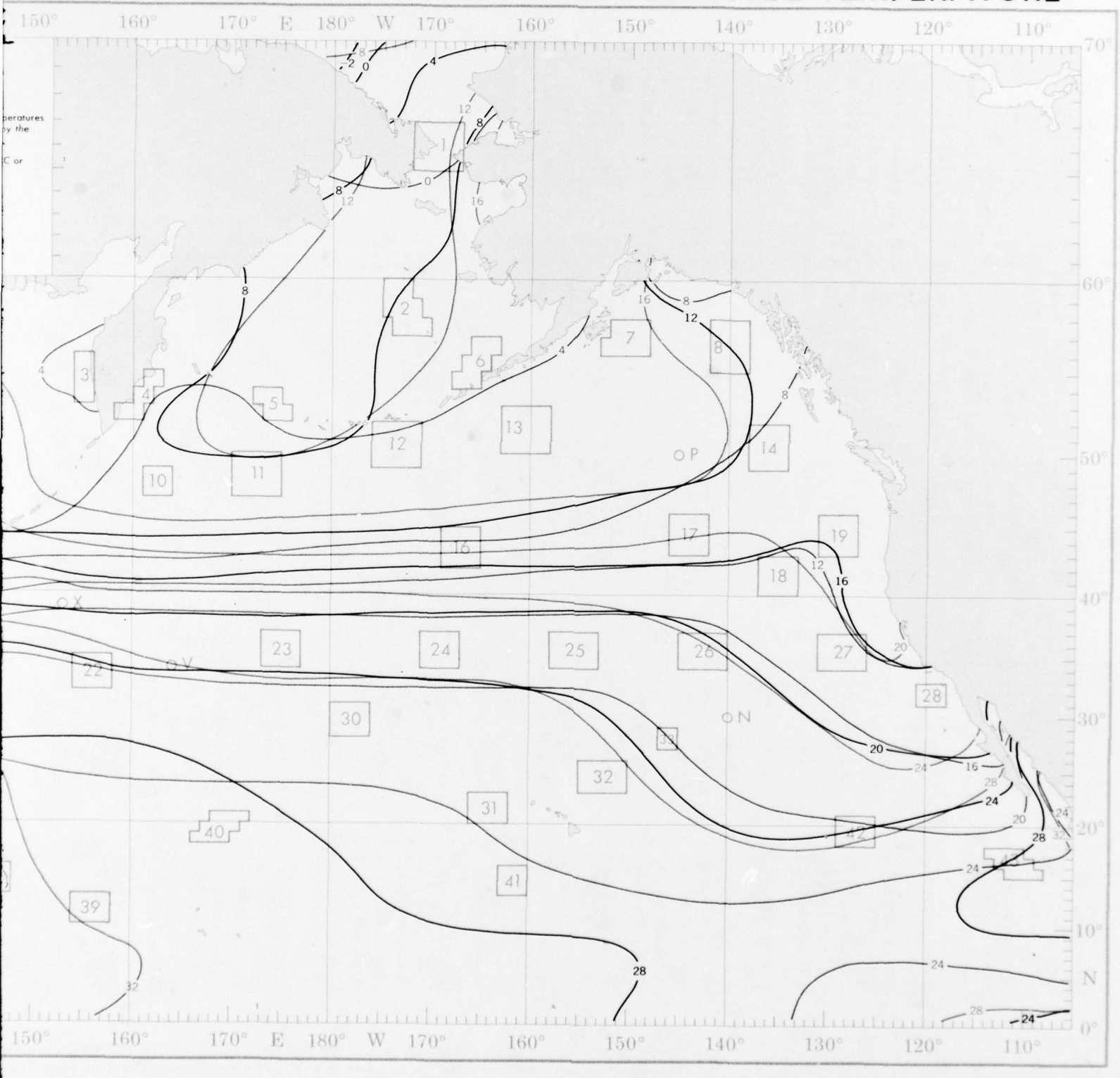


BLACK LINE — Mean sea surface temperature (°C)

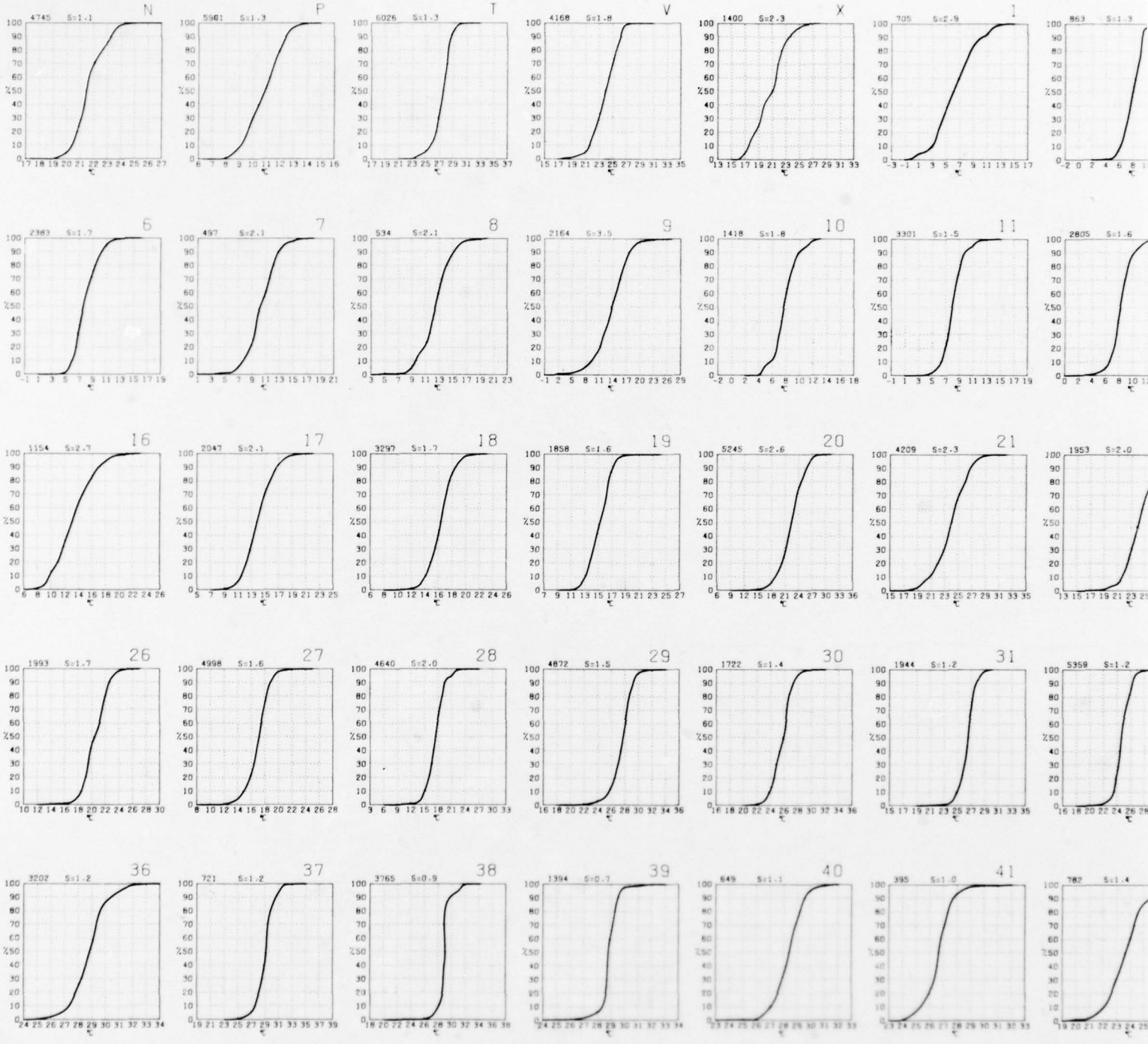
BLUE LINE — Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE — Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

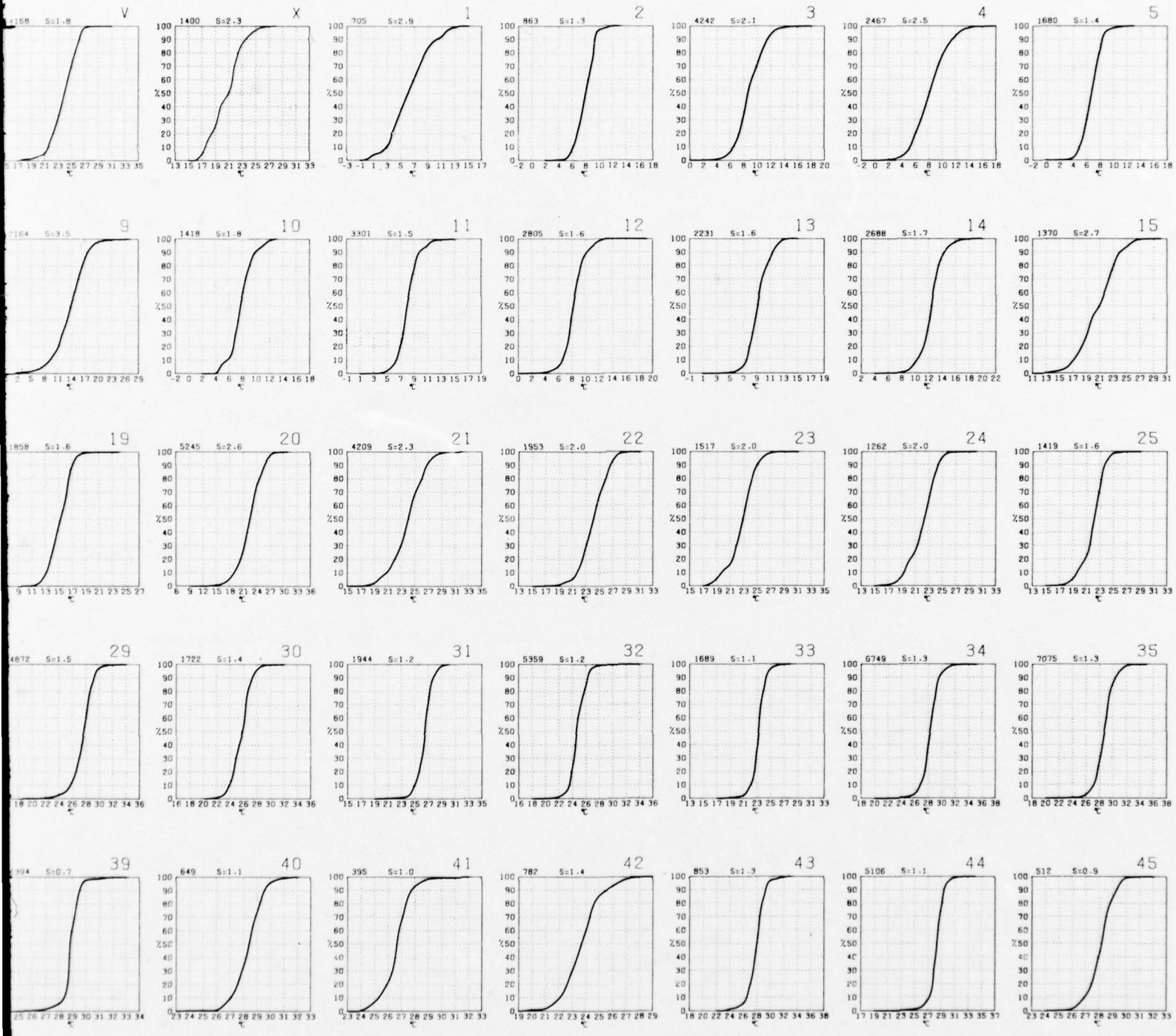
SEA SURFACE TEMPERATURE



SEA SURFACE TEMPERATURE

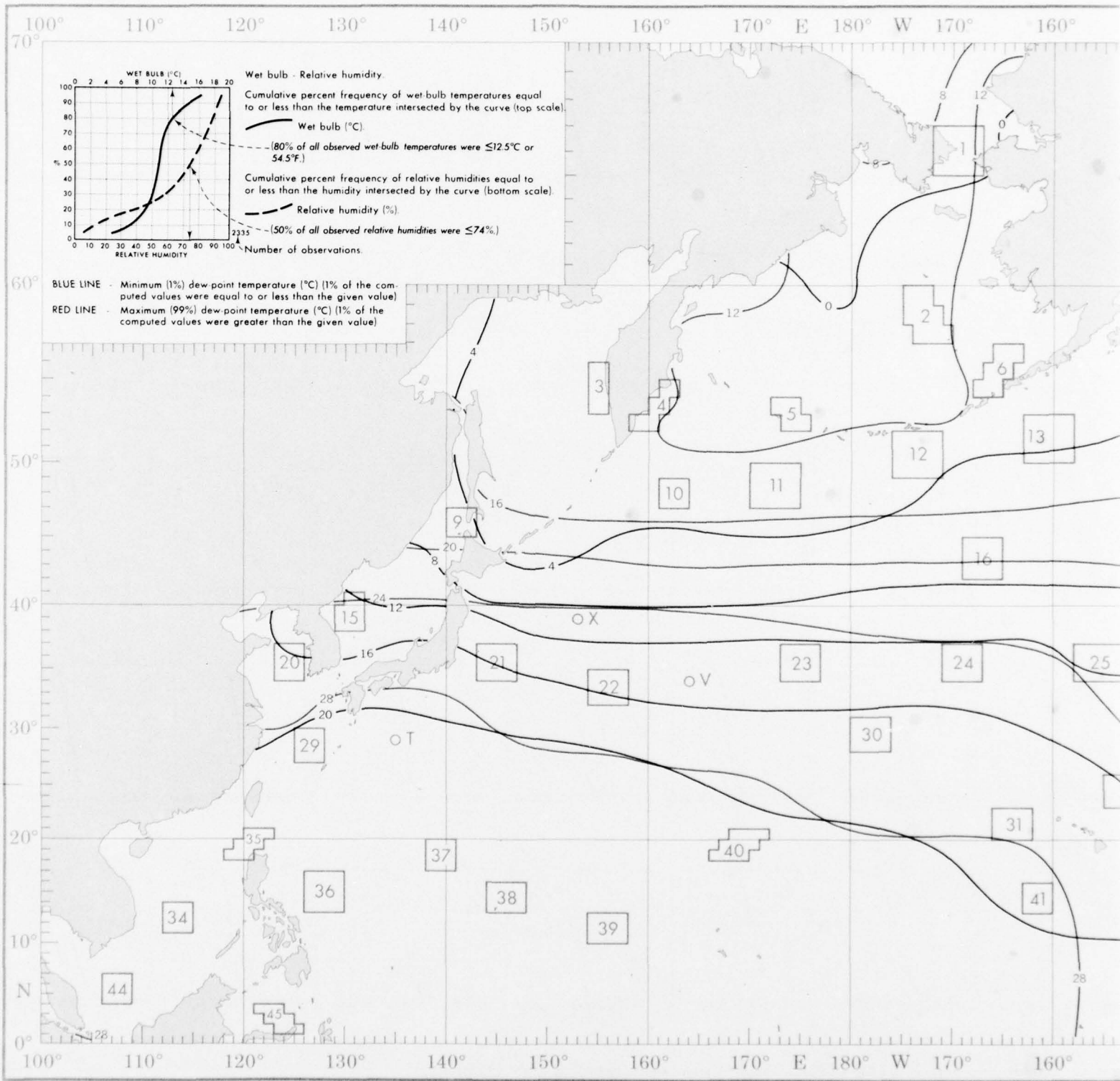


Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are bas[illegible]ll available data subjectively adjusted where

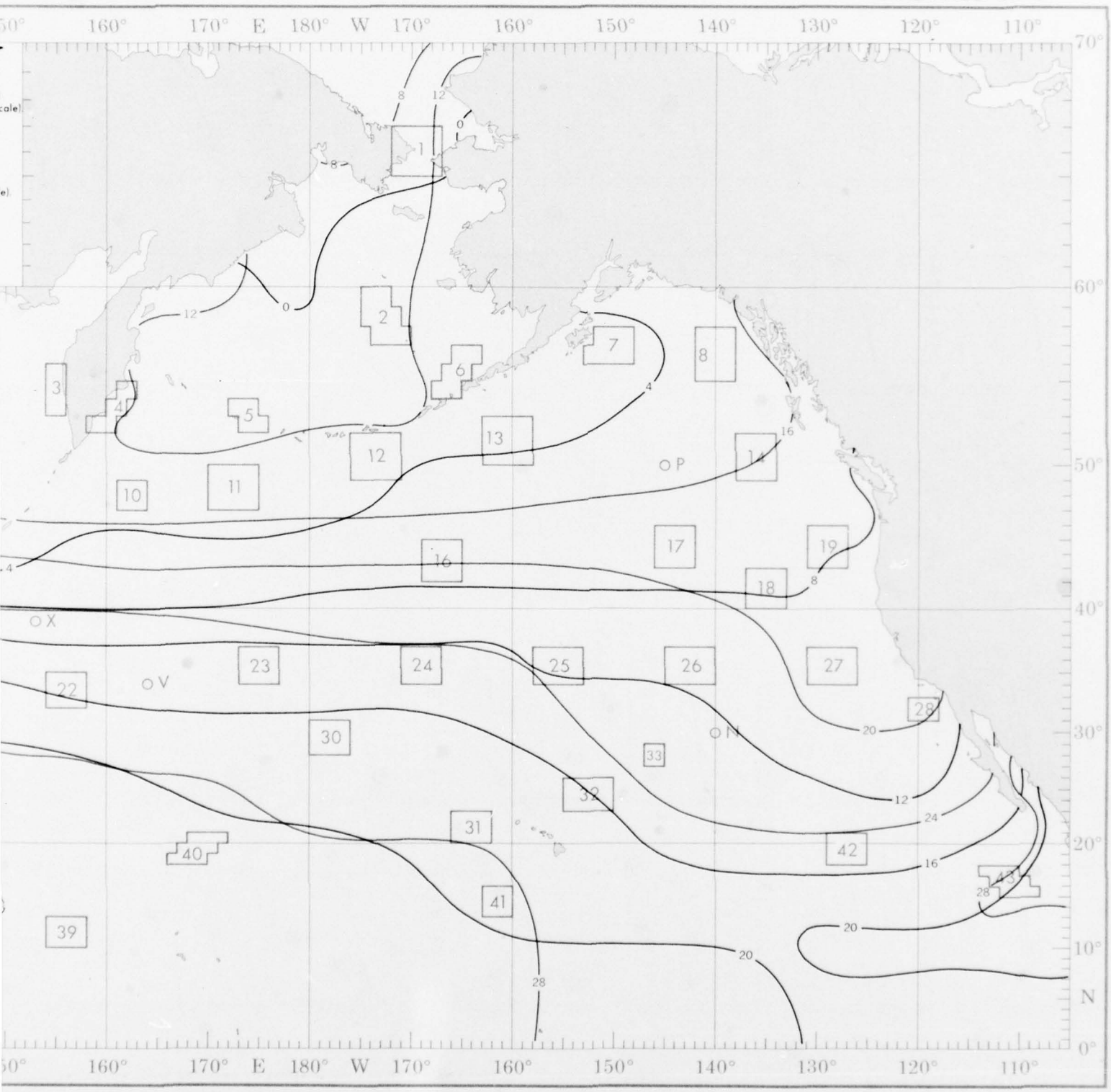


sent the objective compilation of available data for specified areas without regard to suspected biases.
analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

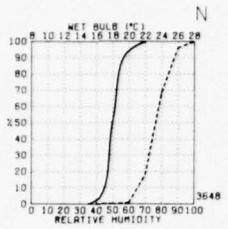
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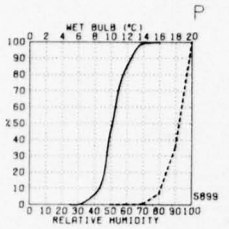

WET BULB (°C)
0 2 4 6 8 10 12 14 16 18 20
100 90 80 70 60 % 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100
RELATIVE HUMIDITY
2335
Wet bulb - Relative humidity.
Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).
Wet bulb (°C).
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)
Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).
Relative humidity (%).
(50% of all observed relative humidities were ≤74%.)
Number of observations.
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 35 36 37 38 39 40 41 44 45
OX OV OT

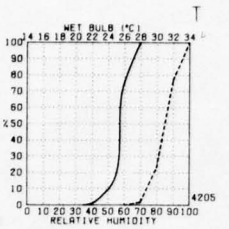
HUMIDITY

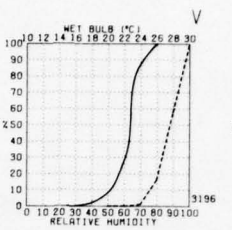

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
O P O X O V O M
8 12 0 -8 12 0 4 16 8 20 12 24 16 28 20 28 20

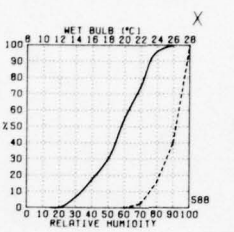
WET BULB AND RELATIVE HUMIDITY

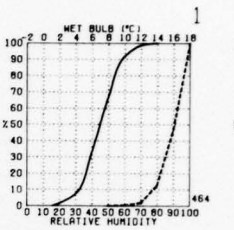


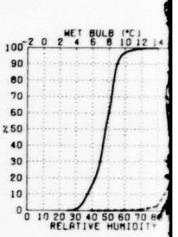


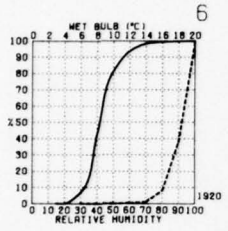


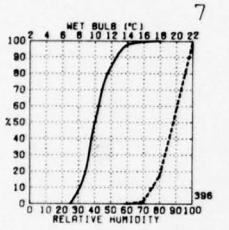


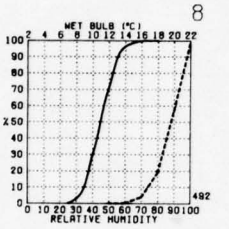


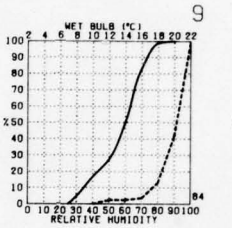


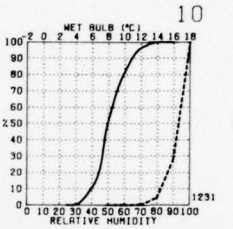


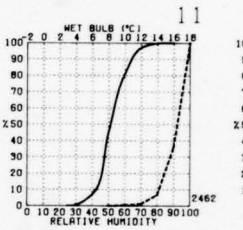


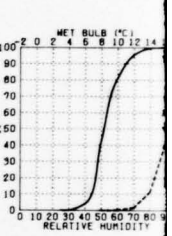


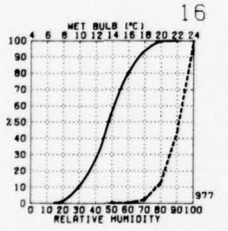


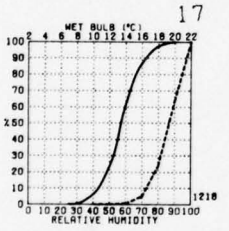


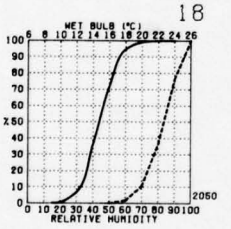


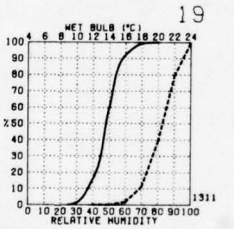


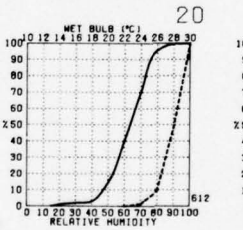


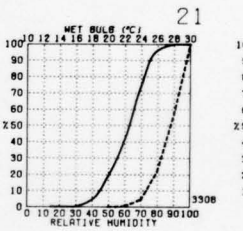


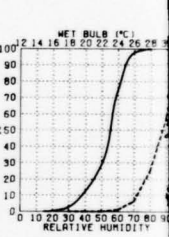


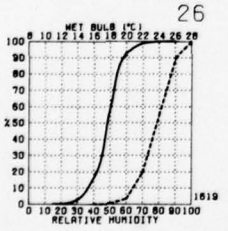


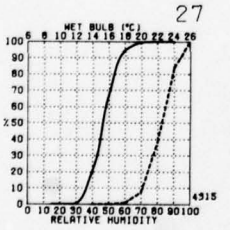


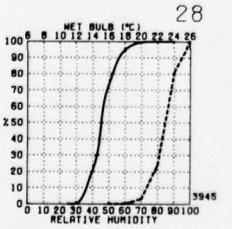


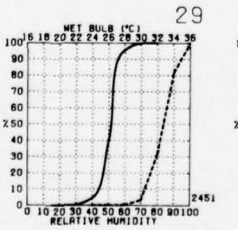


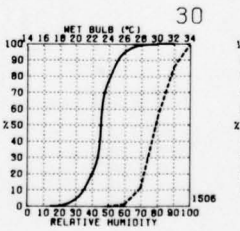


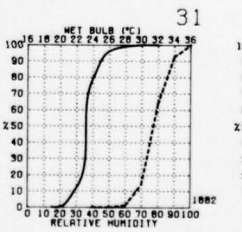


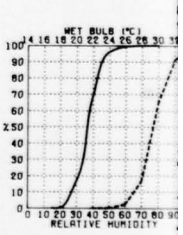


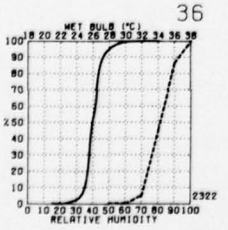


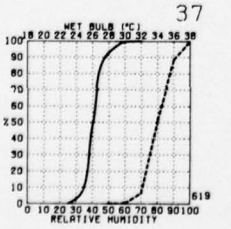


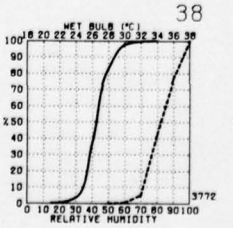


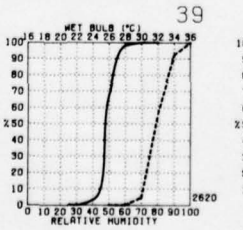


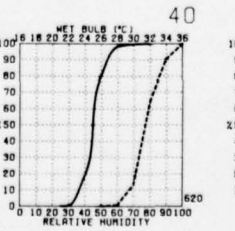


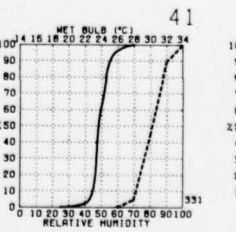


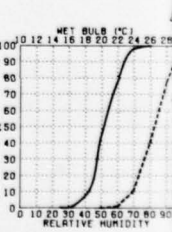








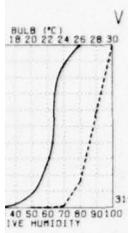


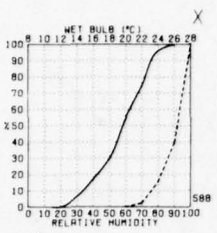


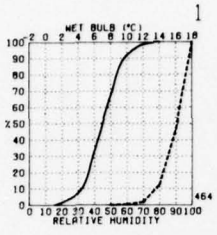
Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

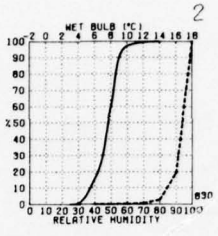
UMIDITY

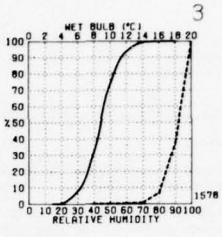
JULY

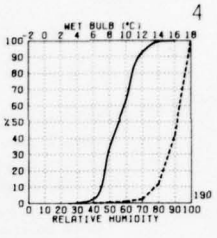


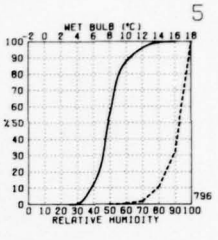




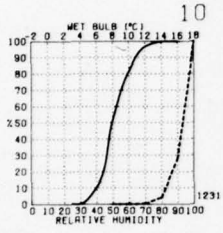


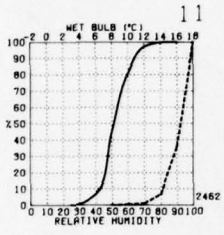


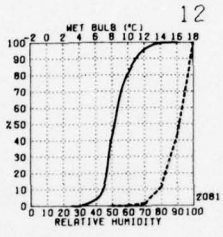


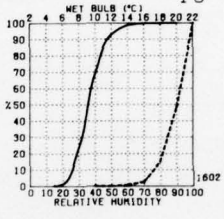


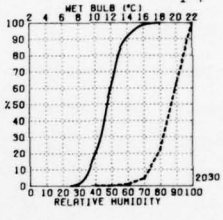


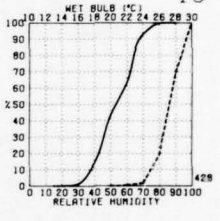


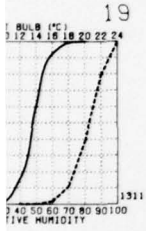


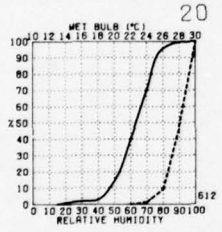


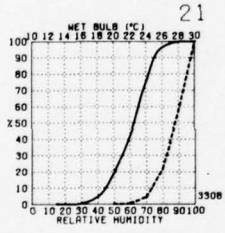


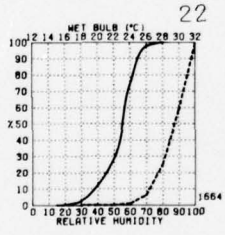


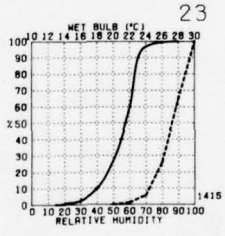


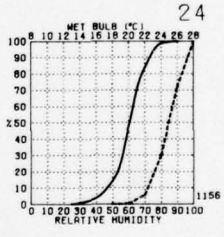


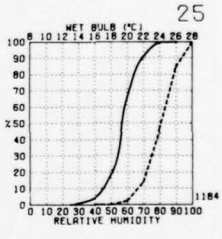


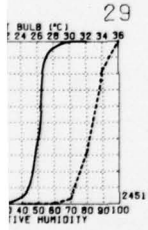


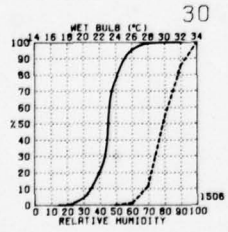


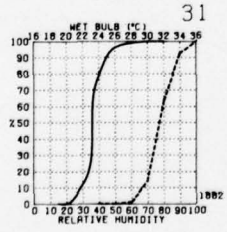


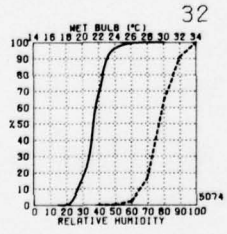


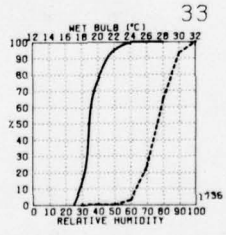


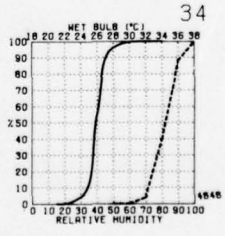


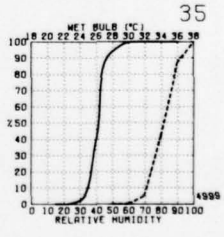


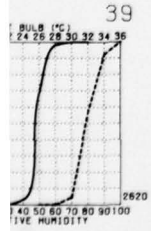


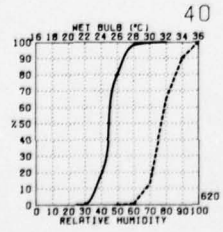


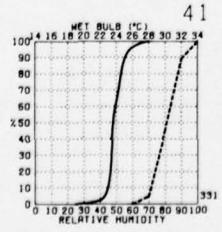


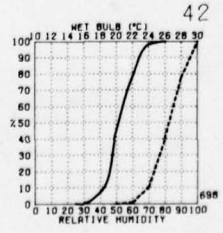


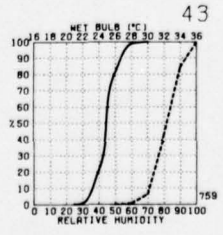


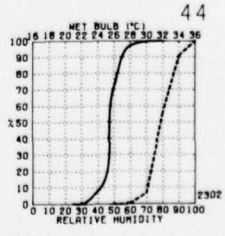


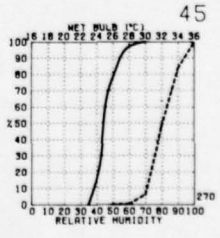






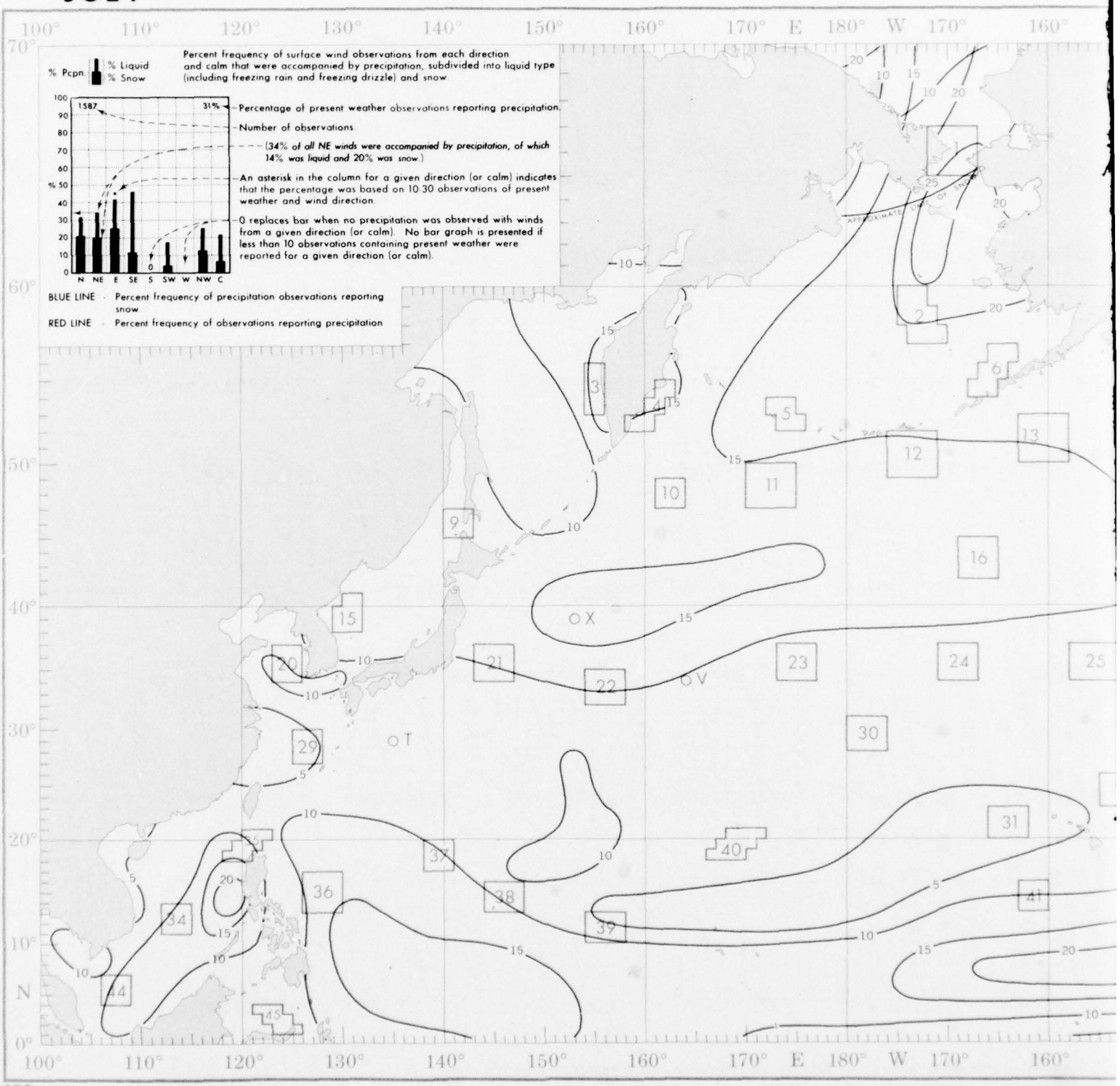




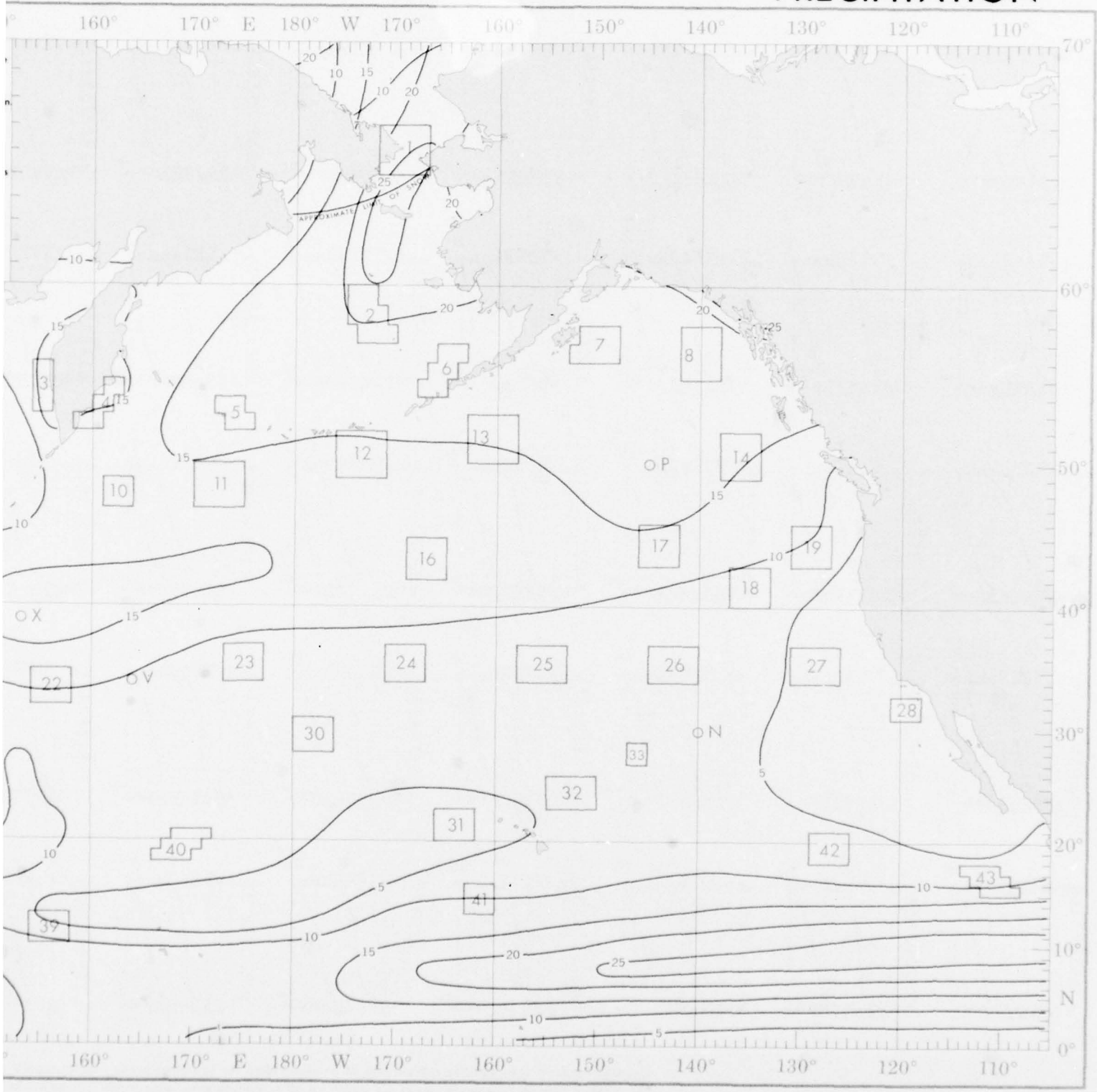


the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

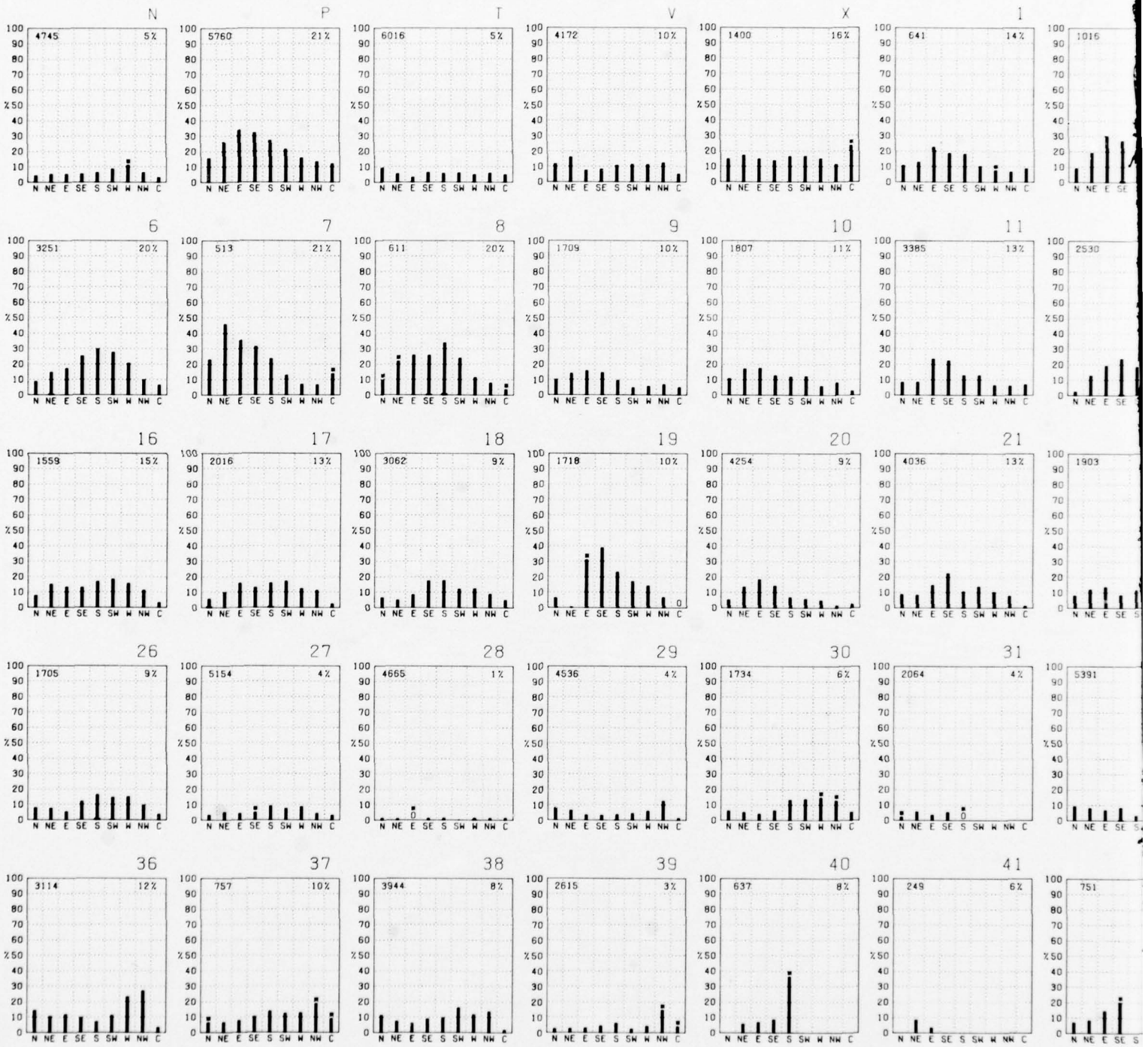
JULY


% Pcpn
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE LIMIT OF SNOW
OX
OV
OT

PRECIPITATION



PRECIPITATION



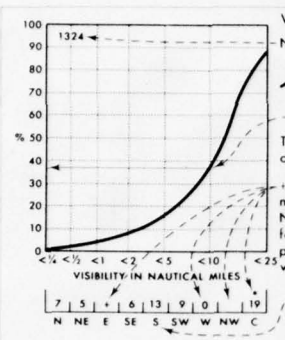
Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

JULY



the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

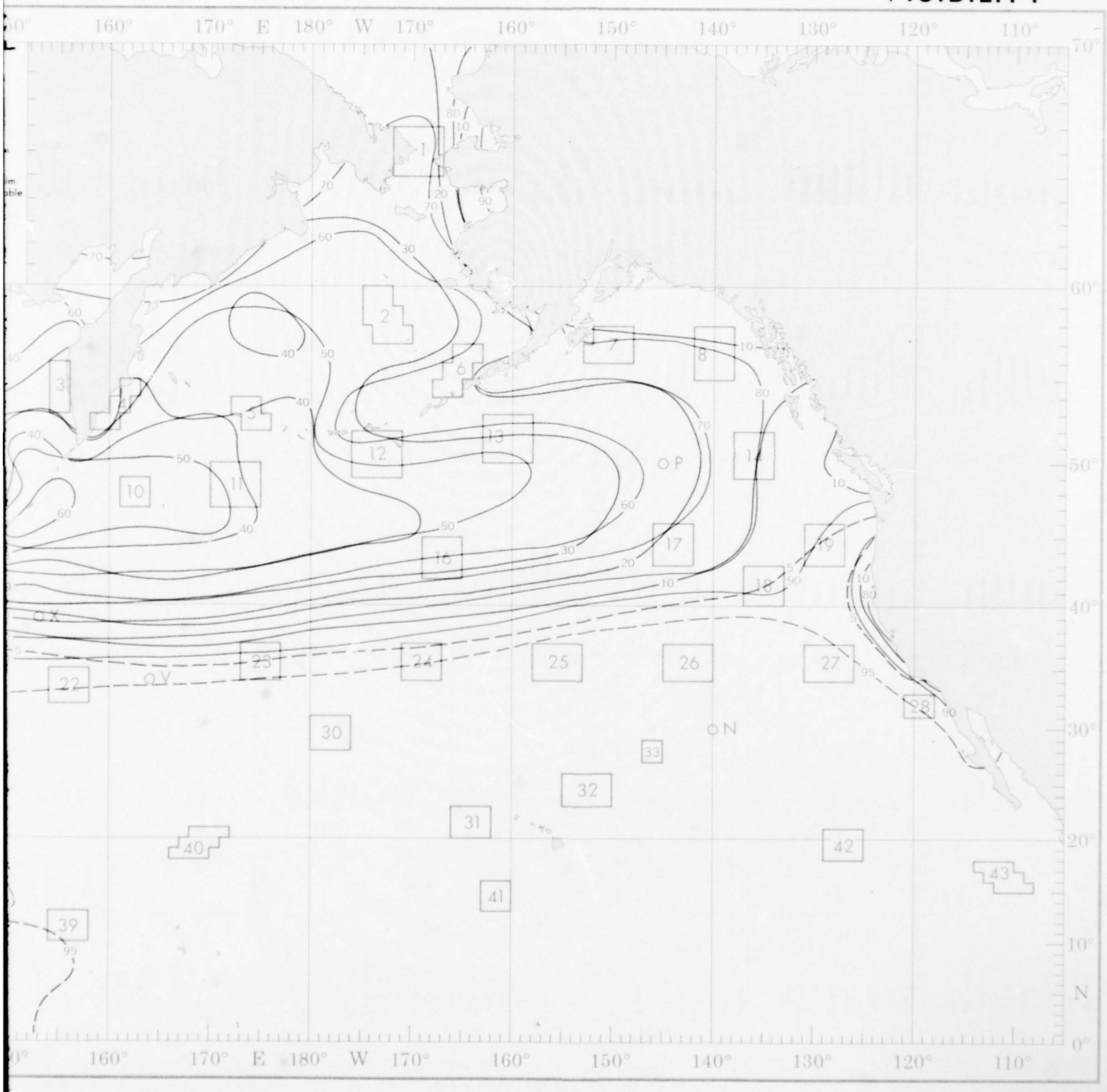
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

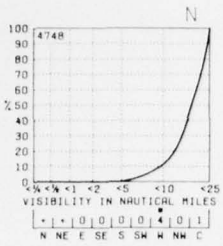
BLUE LINE – Percent frequency of visibilities ≥5 nautical miles

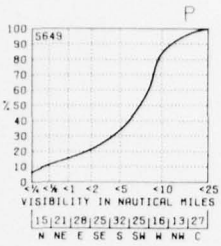
RED LINE – Percent frequency of visibilities <2 nautical miles

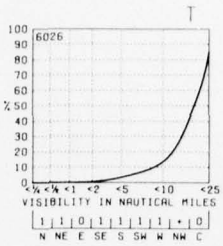
VISIBILITY

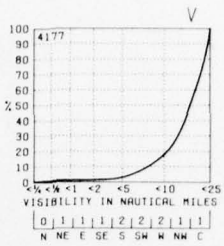

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° N 0°
1
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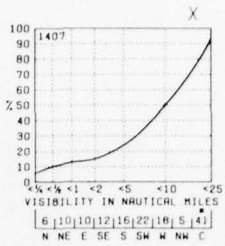
VISIBILITY

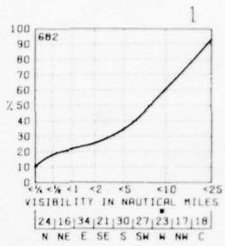


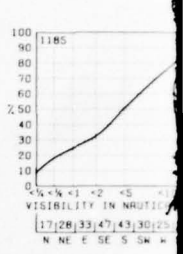


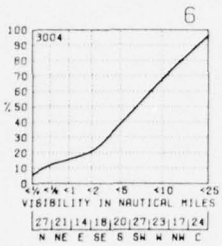


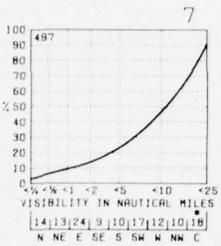


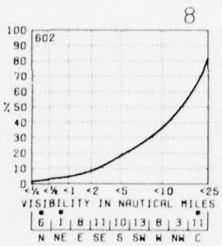


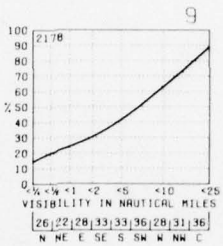


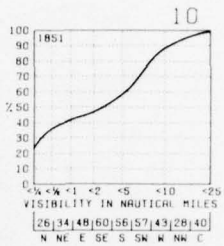


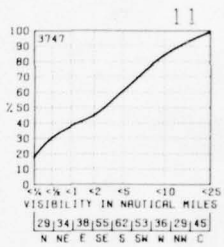


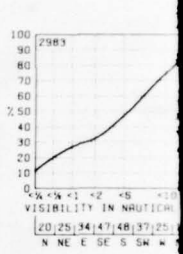


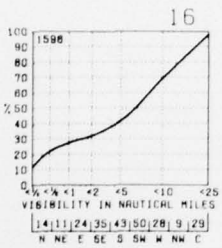


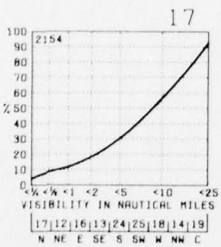


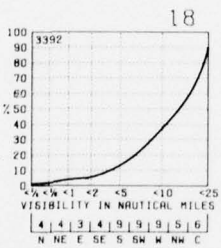


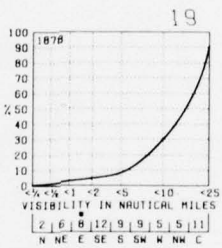


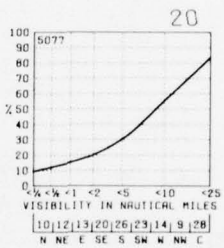


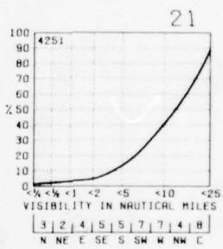


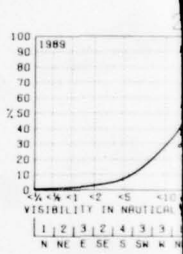


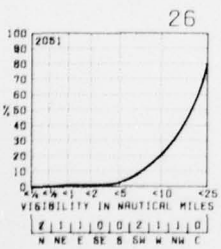


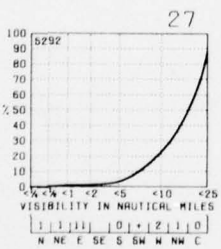


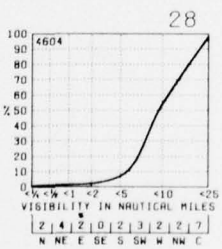


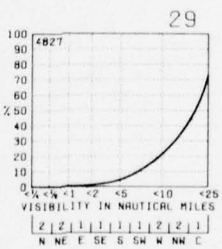


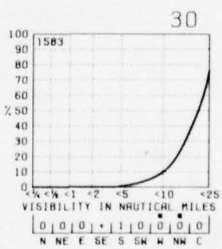


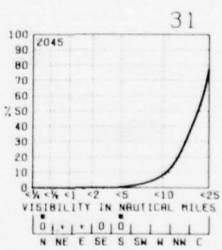


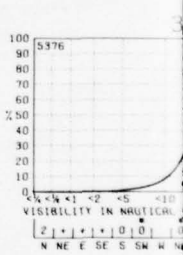


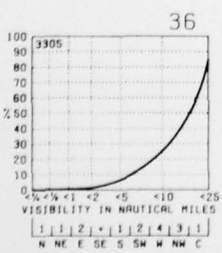


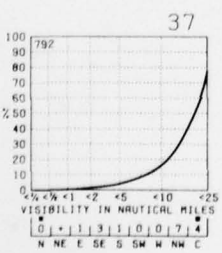


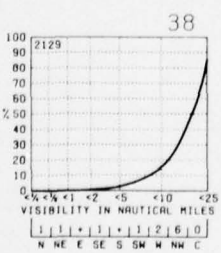


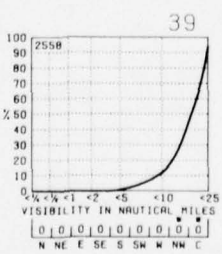


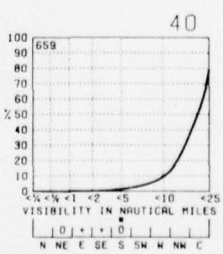


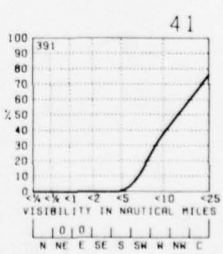


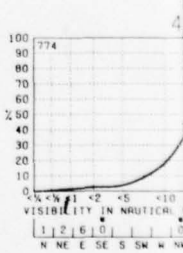






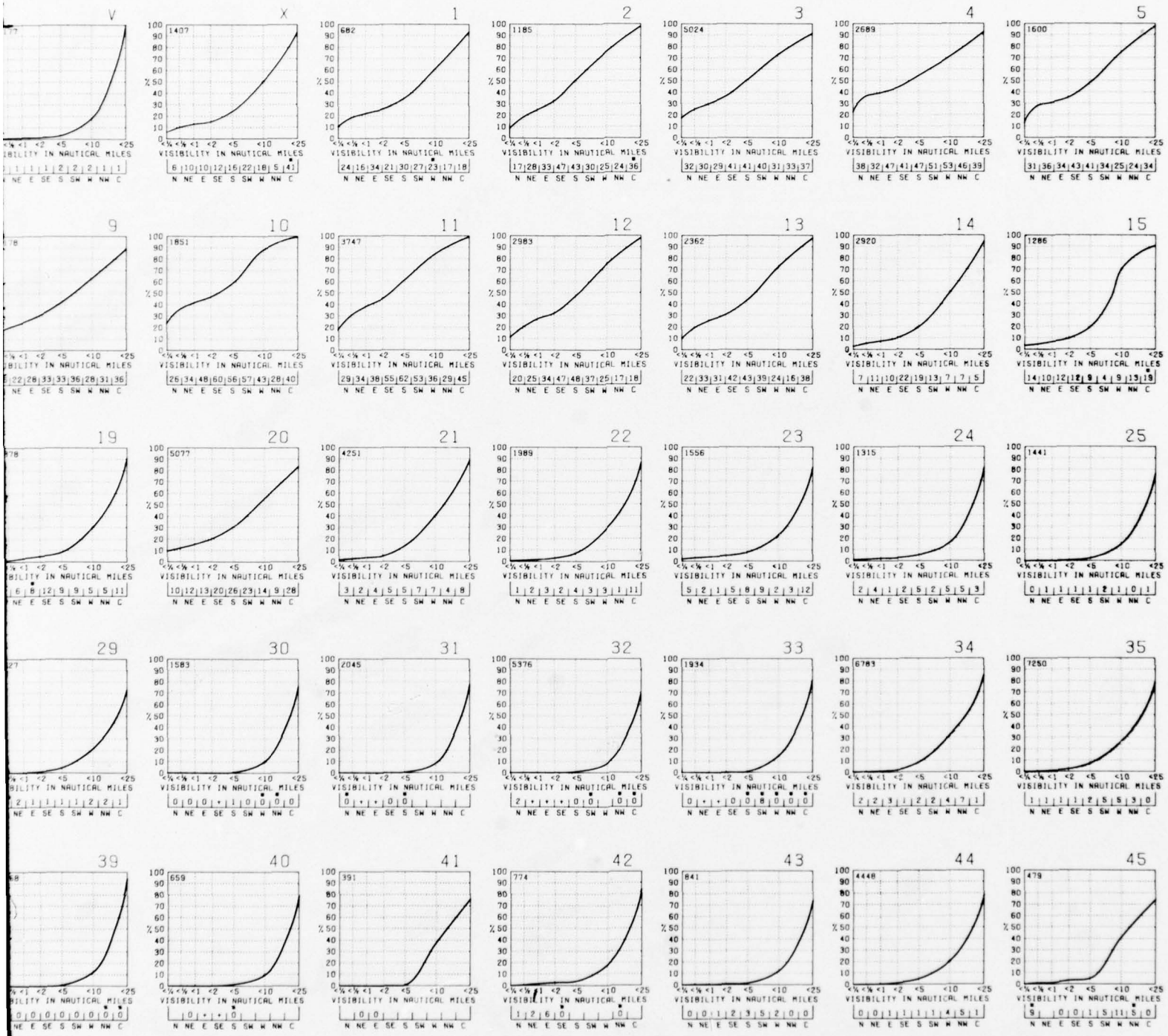






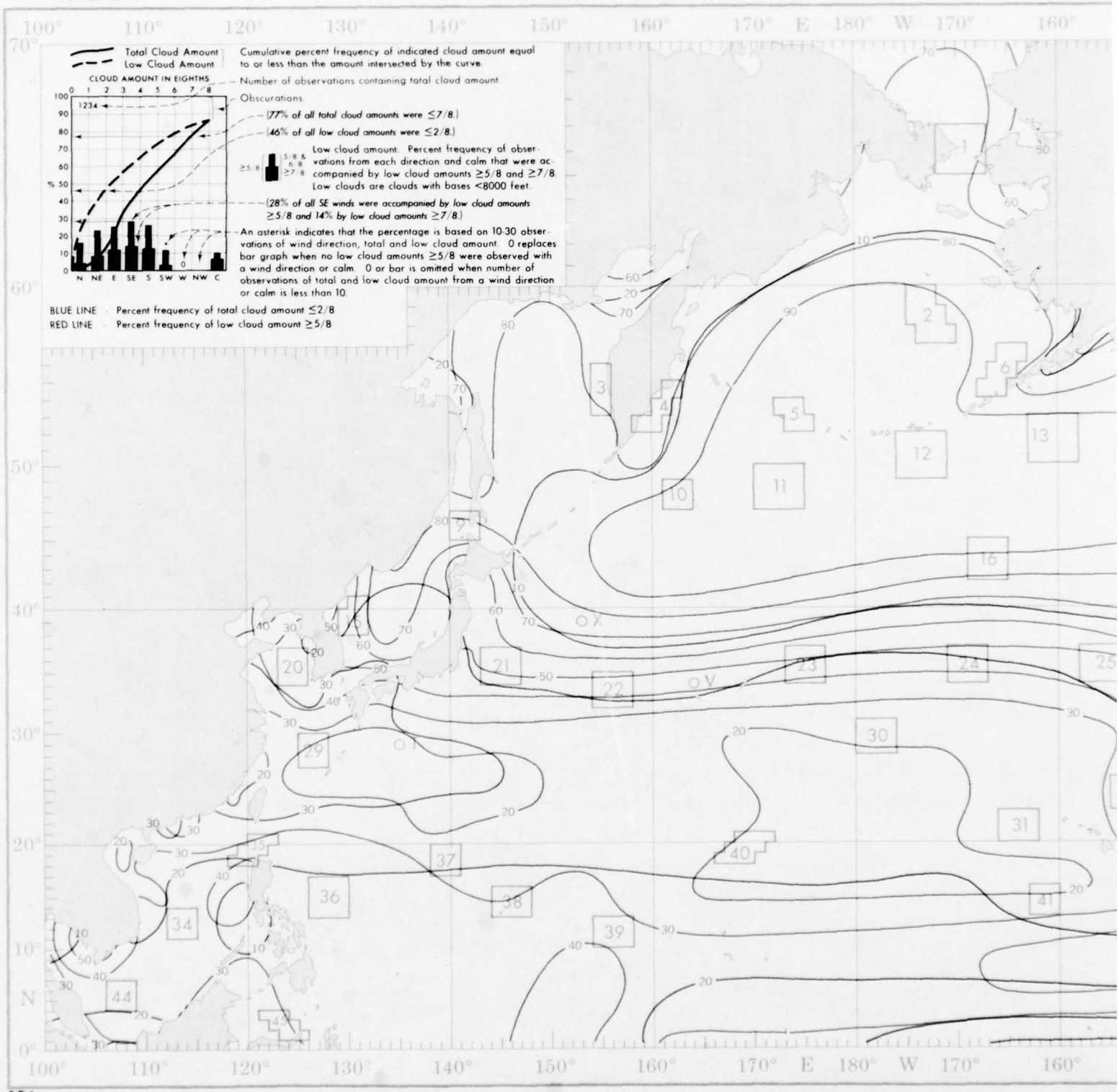
Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

JULY

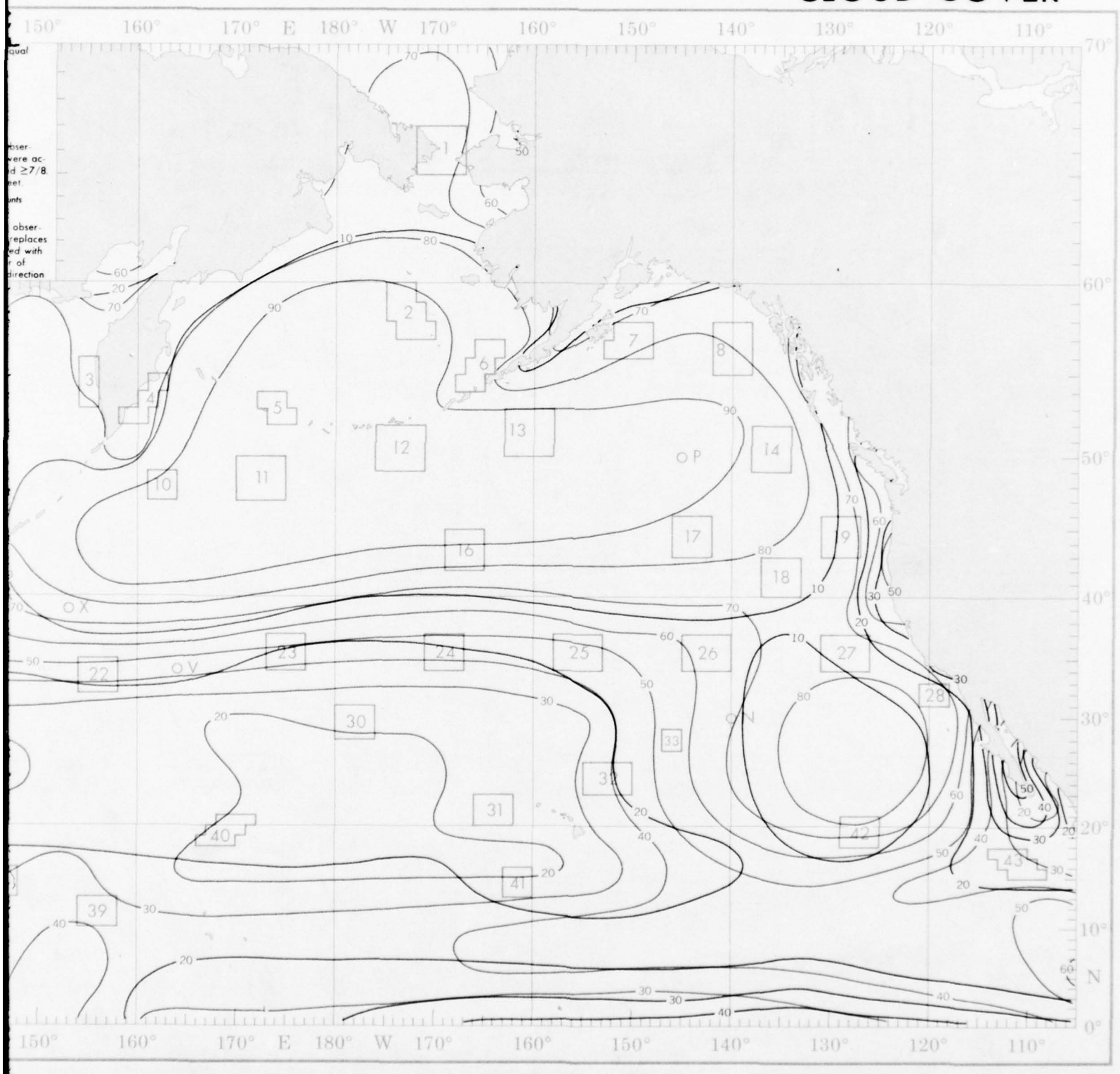


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nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

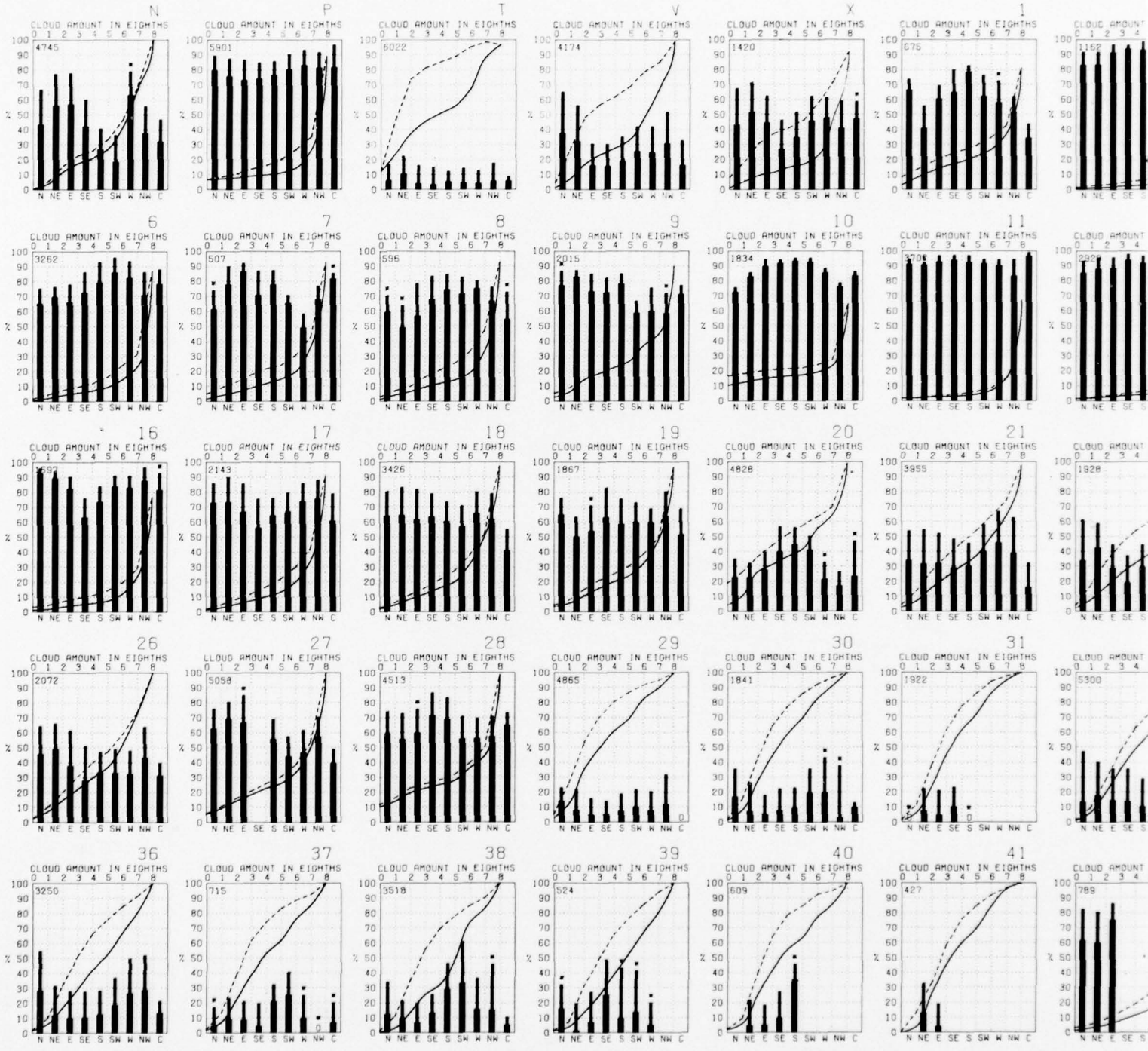
JULY


Total Cloud Amount
Low Cloud Amount
CLOUD AMOUNT IN EIGHTHS
0 1 2 3 4 5 6 7 8
1234
% 50
N NE E SE S SW W NW C
Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.
Number of observations containing total cloud amount.
Obscurations.
(77% of all total cloud amounts were ≤7/8.)
(46% of all low cloud amounts were ≤2/8.)
≥5/8
5/8 & 6/8
≥7/8
Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)
An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.
BLUE LINE - Percent frequency of total cloud amount ≤2/8
RED LINE - Percent frequency of low cloud amount ≥5/8
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

CLOUD COVER

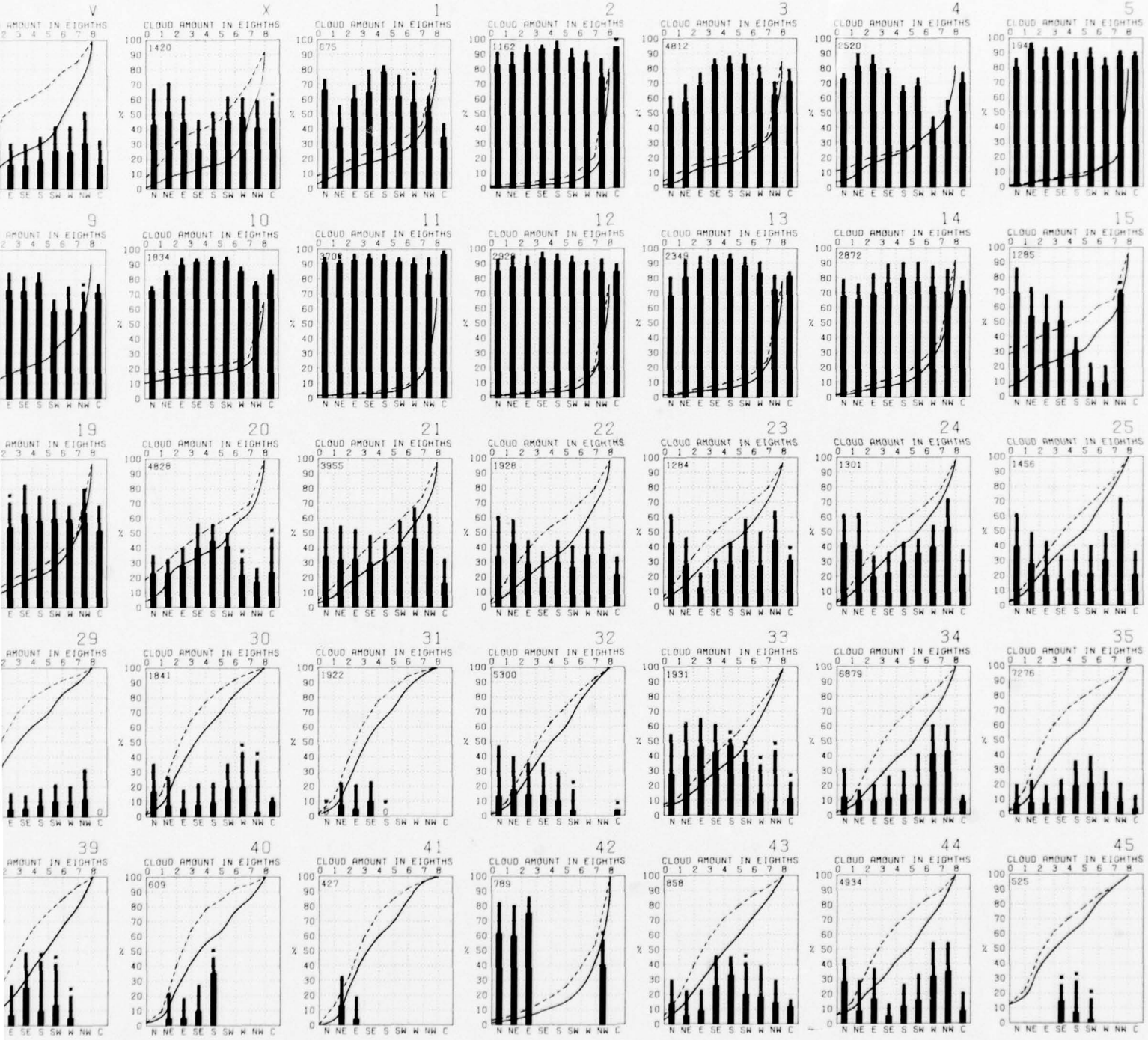

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 18 22 23 24 25 26 27 28 30 31 33 38 39 40 41 42 43
O P O X O V O Z
10 20 30 40 50 60 70 80 90

CLOUD COVER



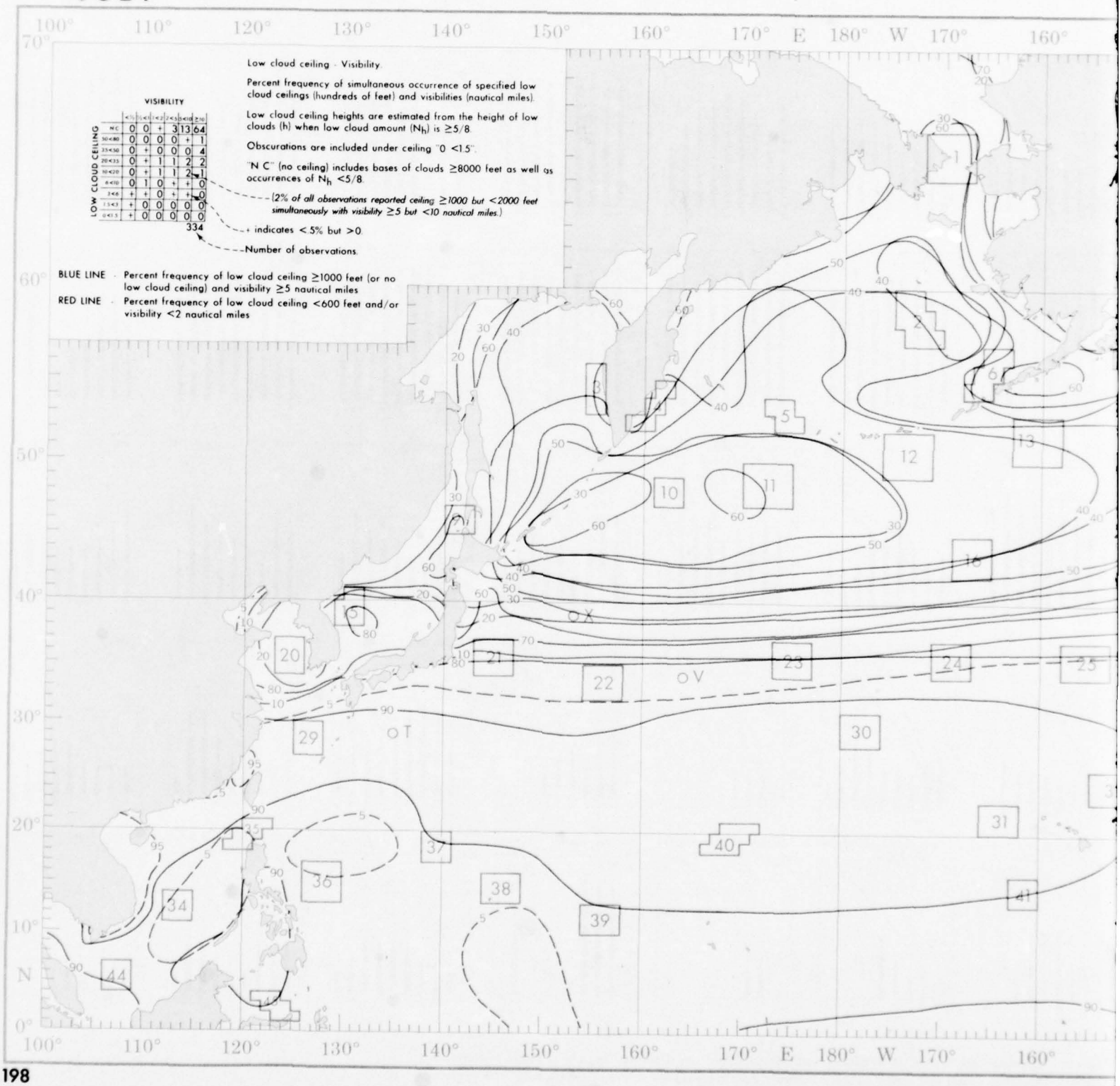
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JULY

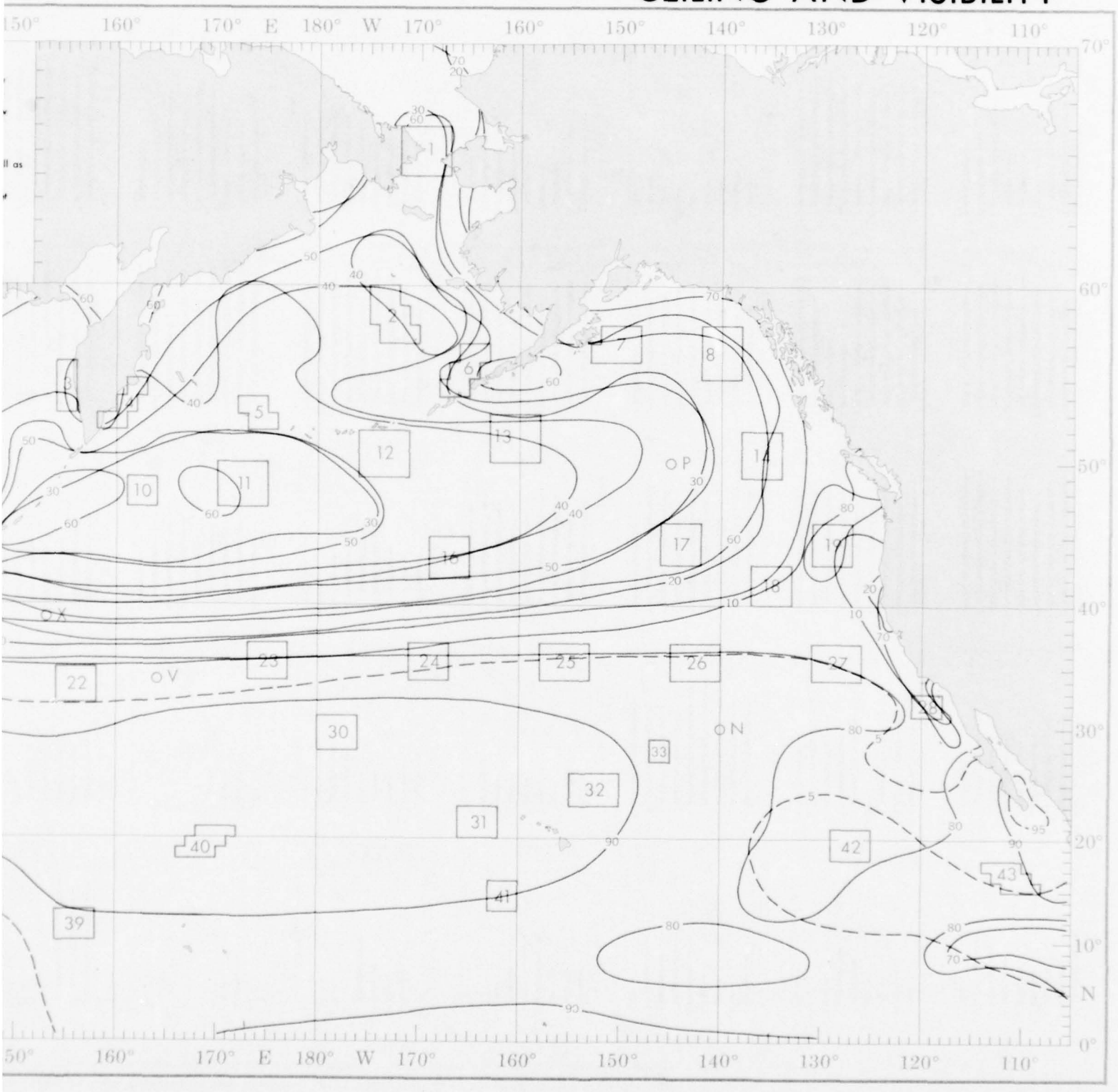


the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

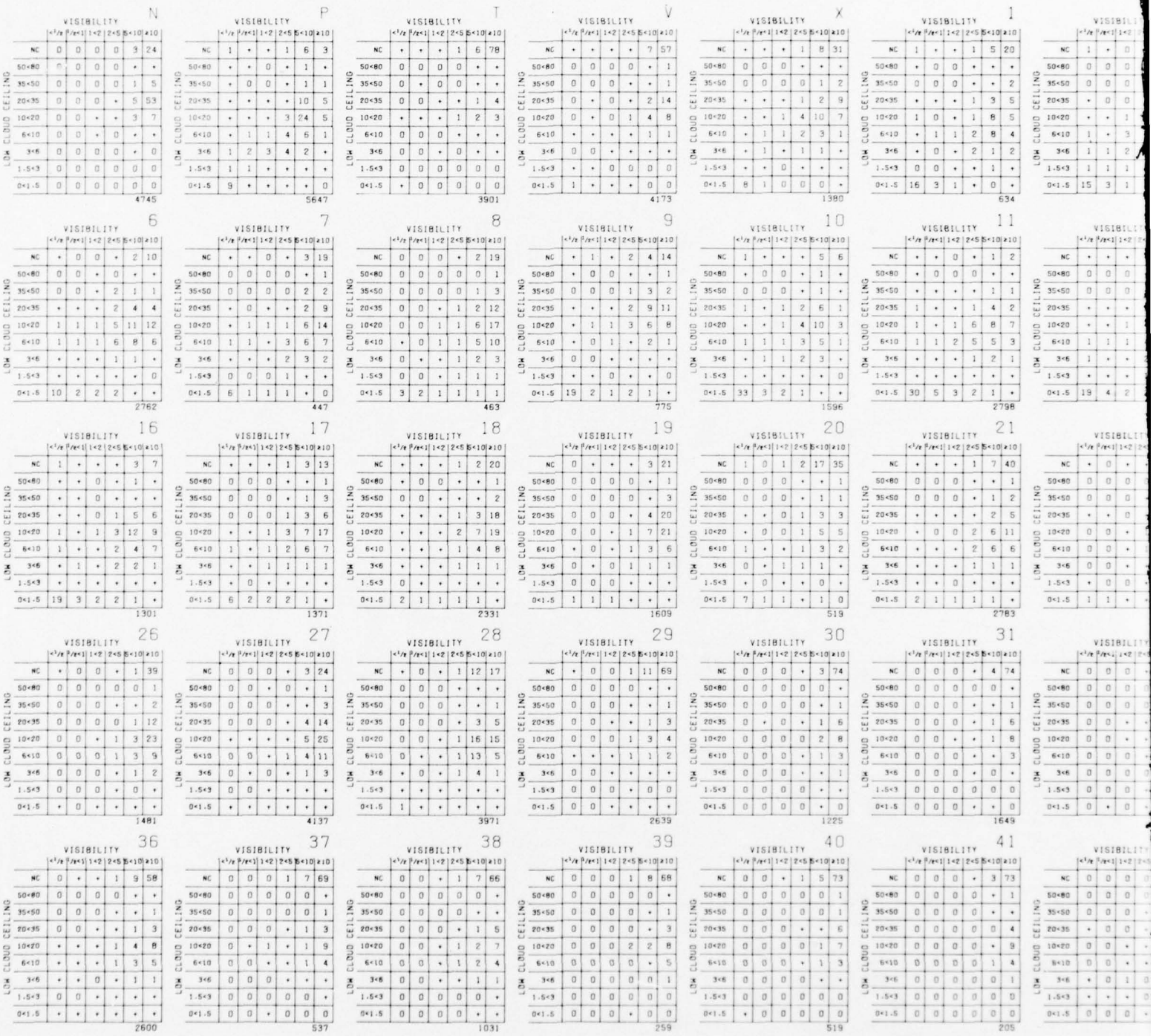
JULY


Low cloud ceiling - Visibility.
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
N C 0 0 + 3 13 64
50-<80 0 0 0 0 + 1
35-<50 0 + 0 0 0 4
20-<35 0 + 1 1 2 2
10-<20 0 + 1 1 2 1
6-<10 0 1 0 + + 0
3-<6 + + 0 + + 0
1.5-<3 + 0 0 0 0 0
0-<1.5 + 0 0 0 0 0
334
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0.
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

CEILING AND VISIBILITY



CEILING AND VISIBILITY



Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

JULY

V

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	7	57	
50<80	0	0	0	*	1	
35<50	0	0	*	*	1	
20<35	*	0	*	2	14	
10<20	*	0	1	4	8	
6<10	*	*	*	1	1	
3<6	0	*	*	*	*	
1.5<3	*	0	0	0	0	
0<1.5	*	*	*	0	0	

4173

X

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	8	31
50<80	0	0	0	*	*	*
35<50	0	0	0	0	1	2
20<35	*	*	*	1	2	9
10<20	*	*	1	4	10	7
6<10	*	1	1	2	3	1
3<6	*	1	*	1	1	*
1.5<3	*	*	0	*	*	*
0<1.5	8	1	0	0	0	*

1380

1

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	1	5	20
50<80	*	0	0	*	*	*
35<50	0	0	0	*	*	2
20<35	*	*	*	1	3	5
10<20	1	0	*	1	8	5
6<10	*	1	1	2	8	4
3<6	*	0	*	2	1	2
1.5<3	0	0	*	*	1	*
0<1.5	16	3	1	*	0	*

634

2

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	0	*	1	4
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	*	0	0	1	4	6
10<20	*	*	1	5	11	11
6<10	1	*	3	7	7	2
3<6	1	1	2	3	1	*
1.5<3	1	1	1	*	*	0
0<1.5	15	3	1	1	*	0

1117

3

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	2	6	12
50<80	*	*	0	*	1	1
35<50	*	*	*	*	1	2
20<35	*	*	*	1	3	4
10<20	1	*	1	5	9	3
6<10	1	*	2	5	6	3
3<6	*	*	1	1	1	*
1.5<3	*	*	*	*	0	*
0<1.5	19	1	2	1	*	0

2958

4

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	1	3	21
50<80	0	*	0	*	1	2
35<50	*	0	*	*	1	2
20<35	*	*	*	2	6	11
10<20	*	*	*	2	4	4
6<10	*	0	*	1	2	1
3<6	*	*	*	1	1	*
1.5<3	*	*	*	*	*	*
0<1.5	25	1	1	1	1	0

1569

5

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	2	6
50<80	*	0	*	*	1	2
35<50	*	0	*	1	2	2
20<35	1	0	*	3	7	7
10<20	1	0	1	3	10	7
6<10	1	1	1	3	4	2
3<6	1	*	1	1	1	*
1.5<3	1	*	0	1	*	*
0<1.5	26	1	1	1	*	*

1367

9

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	2	4	14	
50<80	0	0	*	*	1	
35<50	0	0	1	3	2	
20<35	*	*	2	9	11	
10<20	1	1	3	6	8	
6<10	0	1	*	2	1	
3<6	0	*	*	*	*	
1.5<3	*	0	*	*	*	
0<1.5	2	1	2	1	*	

775

10

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	*	5	6
50<80	*	0	0	*	1	*
35<50	0	0	0	*	1	*
20<35	1	*	1	2	6	1
10<20	*	*	1	4	10	3
6<10	1	1	1	3	5	1
3<6	*	1	1	2	3	*
1.5<3	*	*	*	*	*	0
0<1.5	33	3	2	1	*	*

1596

11

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	*	1	2
50<80	*	0	0	0	*	*
35<50	*	*	*	*	1	1
20<35	1	*	*	1	4	2
10<20	1	*	1	6	8	7
6<10	1	1	2	5	5	3
3<6	*	*	*	1	2	1
1.5<3	*	*	*	*	*	*
0<1.5	30	5	3	2	1	*

2798

12

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	2	4
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	*	0	*	2	4	6
10<20	*	*	1	4	9	9
6<10	1	1	1	4	6	6
3<6	1	*	*	2	2	2
1.5<3	*	*	*	1	*	*
0<1.5	19	4	2	2	2	*

2105

13

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	*	2	7
50<80	0	0	0	*	0	1
35<50	0	0	0	*	1	1
20<35	*	0	*	1	4	5
10<20	1	*	1	4	9	10
6<10	1	*	1	4	7	6
3<6	1	*	*	1	2	1
1.5<3	0	*	*	*	*	*
0<1.5	19	4	2	2	1	*

1703

14

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	*	2	11
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	2
20<35	*	*	*	1	5	10
10<20	*	*	1	3	10	21
6<10	*	*	1	3	6	8
3<6	*	*	*	1	2	1
1.5<3	*	*	*	*	*	*
0<1.5	5	1	1	1	1	*

2179

15

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	35	11
50<80	0	0	0	*	2	*
35<50	0	0	0	*	4	1
20<35	0	0	0	1	9	1
10<20	0	*	*	2	12	1
6<10	0	0	1	1	6	*
3<6	*	*	*	2	3	*
1.5<3	0	*	0	*	0	0
0<1.5	4	*	1	1	*	0

779

19

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	3	21	
50<80	0	0	0	*	1	
35<50	0	0	0	*	3	
20<35	0	*	4	20		
10<20	0	*	1	7	21	
6<10	0	*	1	3	6	
3<6	*	0	1	1	1	
1.5<3	0	0	*	*	*	
0<1.5	1	1	*	*	*	

1609

20

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	0	1	2	17	35
50<80	0	0	0	*	*	1
35<50	0	0	0	*	1	1
20<35	*	*	0	1	3	3
10<20	*	0	0	1	5	5
6<10	1	*	*	1	3	2
3<6	0	*	1	1	1	*
1.5<3	*	0	*	*	0	*
0<1.5	7	1	1	*	1	0

519

21

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	7	40
50<80	0	0	0	*	*	1
35<50	0	0	0	*	1	2
20<35	*	*	0	*	2	5
10<20	*	0	0	2	6	11
6<10	*	*	*	2	6	6
3<6	*	*	*	1	1	1
1.5<3	*	*	0	*	*	*
0<1.5	2	1	1	1	1	*

2783

22

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	*	4	50
50<80	0	0	0	0	0	1
35<50	0	0	0	*	*	1
20<35	*	*	0	*	2	5
10<20	0	0	*	1	5	11
6<10	0	0	*	1	4	6
3<6	0	0	*	*	1	1
1.5<3	*	0	0	*	*	*
0<1.5	1	1	*	*	1	*

1505

23

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	3	54
50<80	0	0	*	0	0	1
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	4
10<20	*	0	*	*	3	13
6<10	0	0	*	*	2	7
3<6	0	0	*	*	1	2
1.5<3	*	0	0	*	*	*
0<1.5	3	1	*	*	*	0

1078

24

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	2	53
50<80	0	0	0	0	0	*
35<50	*	0	0	0	*	1
20<35	0	0	0	*	1	7
10<20	0	0	0	*	3	12
6<10	*	0	*	1	2	9
3<6	0	*	0	*	1	2
1.5<3	*	0	*	0	*	*
0<1.5	1	1	*	*	*	*

1096

25

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	2	52
50<80	*	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	1	8
10<20	0	0	0	*	2	15
6<10	0	0	0	*	2	9
3<6	0	0	*	1	1	2
1.5<3	0	0	0	0	*	*
0<1.5	0	*	*	*	*	*

1181

29

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	11	69	
50<80	0	0	0	*	*	
35<50	0	0	*	*	1	
20<35	*	*	1	3		
10<20	0	1	3	4		
6<10	*	*	1	1	2	
3<6	0	*	*	*	*	
1.5<3	0	0	*	0	0	
0<1.5	0	*	*	*	*	

2639

30

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	74
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	1
20<35	0	*	0	*	1	6
10<20	0	0	0	0	2	8
6<10	0	0	0	*	1	3
3<6	0	0	0	*	*	1
1.5<3	0	0	0	0	0	*
0<1.5	0	0	0	0	*	0

1225

31

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	74
50<80	0	0	0	0	0	*
35<50	0	0	0	*	*	1
20<35	0	0	0	*	1	6
10<20	0	0	*	*	1	8
6<10	0	0	0	*	*	3
3<6	0	0	0	*	0	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	*	*	0

1649

32

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	60
50<80	0	0	0	0	*	*
35<50	0	0	0	0	*	2
20<35	0	0	0	*	1	8
10<20	0	0	*	*	1	15
6<10	0	0	0	*	1	7
3<6	0	0	0	0	*	1
1.5<3	0	0	0	0	*	*
0<1.5	0	*	0	*	*	*

4357

33

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	2	39
50<80	0	0	0	0	*	1
35<50	0	0	0	*	2	7
20<35	0	0	*	0	6	13
10<20	0	0	*	*	2	16
6<10	0	0	0	*	*	8
3<6	0	0	0	0	*	1
1.5<3	0	0	0	0	0	0
0<1.5	0	*	0	*	*	*

1728

34

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	11	50
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	*	0	*	*	2	3
10<20	*	*	*	2	6	9
6<10	*	*	*	2	4	4
3<6	*	*	*	1	1	1
1.5<3	0	*	*	*	*	*
0<1.5	*	*	*	*	*	*

5578

35

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	9	62
50<80	0	0	0	*	*	*
35<50	0	0	*	*	*	*
20<35	*	*	*	*	1	3
10<20	*	*	*	1	4	6
6<10	*	*	*	1	3	3
3<6	*	*	*	*	1	*
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

6074

39

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	1	8	68	
50<80	0	0	0	0	*	
35<50	0	0	0	*	1	
20<35	0	0	0	*	3	
10<20	0	0	2	2	8	
6<10	0	0	0	*	5	
3<6	0	0	0	0	1	
1.5<3	0	0	0	0	0	
0<1.5	0	0	*	0	0	

259

40

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	5	73
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	*	6
10<20	0	0	0	0	1	7
6<10	0	0	0	*	1	3
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	0	0	0

519

41

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	73
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	*
20<35	0	0	0	0	0	4
10<20	0	0	0	0	*	9
6<10	0	0	0	0	1	4
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

205

42

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	18
50<80	0	0	0	0	0	2
35<50	0	0	0	*	*	2
20<35	*	0	0	*	2	13
10<20	0	0	0	*	3	27
6<10	0	0	0	*	3	16
3<6	*	0	1	0	2	2
1.5<3	*	*	*	0	*	*
0<1.5	0	0	0	*	*	*

664

43

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	3	69
50<80	0	0	0	0	0	1
35<50	0	0	0	0	*	2
20<35	0	0	0	*	1	4
10<20	*	0	0	0	2	10
6<10	0	0	*	*	1	5
3<6	0	*	0	0	*	1
1.5<3	0	0	0	*	*	*
0<1.5	*	0	0	0	*	0

749

44

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	7	59
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	*	*	*	2	4
10<20	0	0	*	1	4	9
6<10	*	*	*	1	3	4
3<6	0	0	*	*	1	1
1.5<3	0	0	0	*	*	*
0<1.5	0	*	*	*	*	*

2424

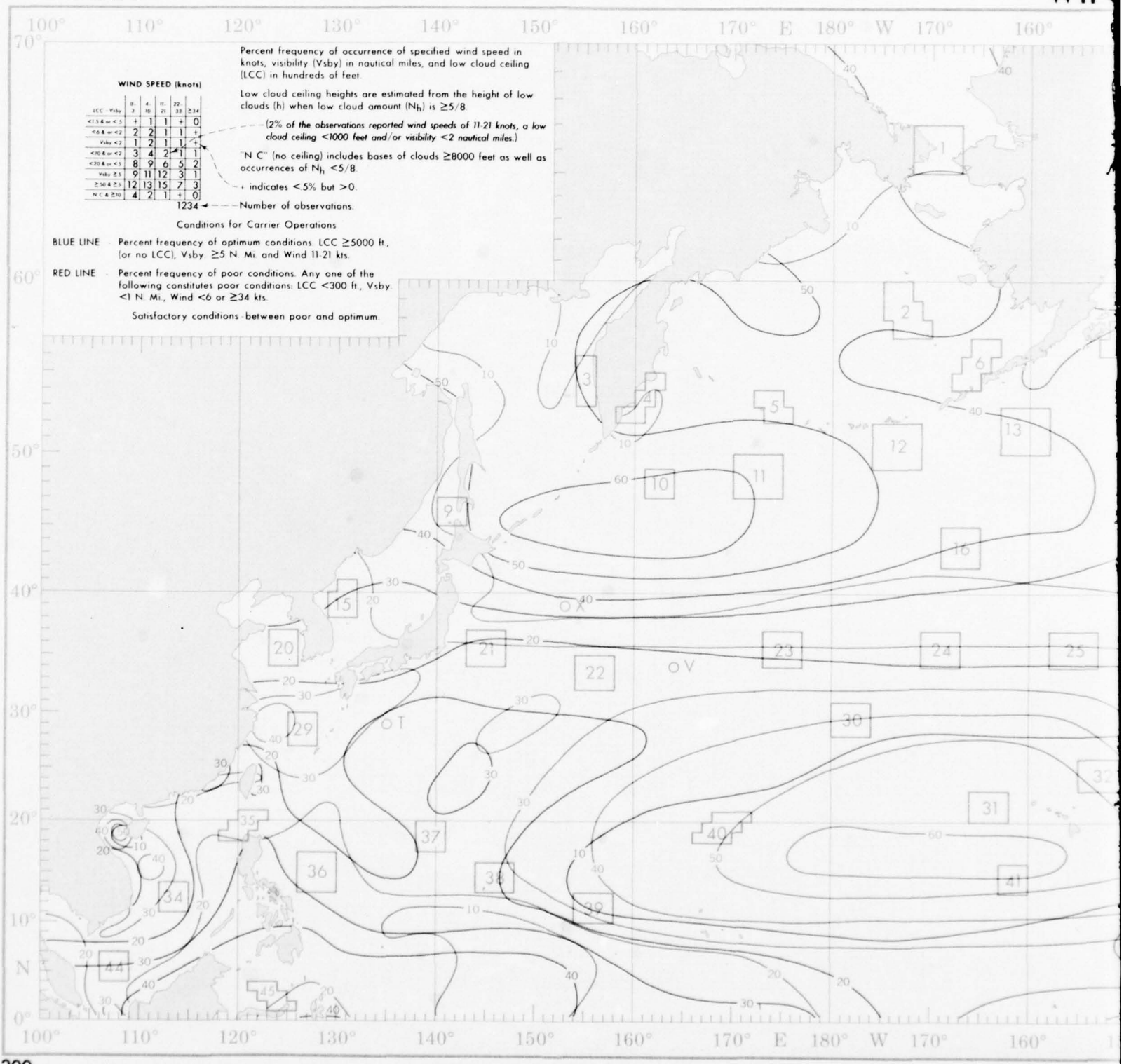
45

VISIBILITY / CLOUD CEILING	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	75
50<80	0	0	0	0	0	0
35<50	0	0	0	0	2	0
20<35	0	0	0	0	0	3
10<20	0	0	0	0	0	6
6<10	0	0	0	0	0	6
3<6	0	0	0	2	3	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

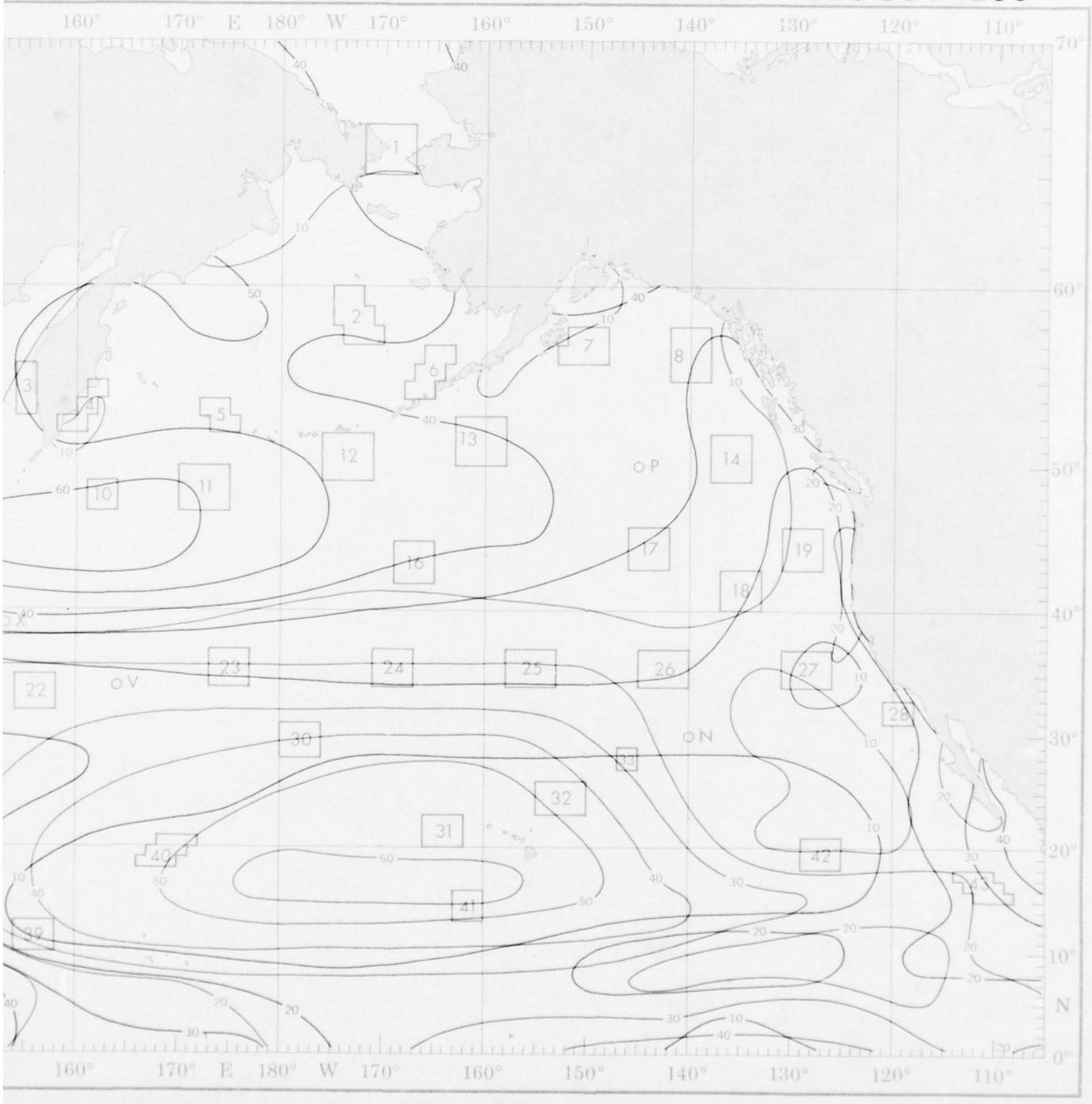
64

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY


100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
WIND SPEED (knots)
LCC - Vsby
0-3 4-10 11-21 22-33 ≥34
<1.5 & or <.5 + 1 1 + 0
<.6 & or <2 2 2 1 1 +
Vsby <2 1 2 1 1 +
<10 & or <2 3 4 2 1 1
<20 & or <5 8 9 6 5 2
Vsby ≥5 9 11 12 3 1
≥50 & ≥5 12 13 15 7 3
N C & ≥10 4 2 1 + 0
1234
Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
+ indicates <.5% but >0.
Number of observations.
Conditions for Carrier Operations
BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.
RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.
Satisfactory conditions between poor and optimum.

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	+	+	+	0	0
<10 & OR <2	+	+	+	0	0
<20 & OR <5	+	3	6	+	0
VSBY ≥5	6	35	55	4	0
≥50 & ≥5	3	12	11	+	0
NC & ≥10	3	11	9	+	0

4742

P

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	7	1	+
<6 & OR <2	2	7	15	4	+
VSBY <2	1	6	12	3	+
<10 & OR <2	2	10	21	6	+
<20 & OR <5	4	19	38	11	1
VSBY ≥5	3	21	34	8	+
≥50 & ≥5	+	3	6	1	+
NC & ≥10	+	1	2	+	0

5638

T

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	5	2	1
VSBY ≥5	5	32	51	8	+
≥50 & ≥5	5	30	44	6	+
NC & ≥10	4	28	41	4	+

3895

V

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	+	1	1	+	0
<10 & OR <2	+	2	2	+	+
<20 & OR <5	1	6	8	1	+
VSBY ≥5	8	43	42	4	+
≥50 & ≥5	5	30	27	2	+
NC & ≥10	4	27	24	2	0

4168

X

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	5	1	+
<6 & OR <2	1	6	9	2	+
VSBY <2	1	5	7	1	+
<10 & OR <2	1	7	13	3	+
<20 & OR <5	2	11	25	7	1
VSBY ≥5	3	21	42	10	1
≥50 & ≥5	2	11	22	4	+
NC & ≥10	2	10	16	3	+

1380

1

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	11	2	0
<6 & OR <2	2	10	15	4	+
VSBY <2	2	8	12	3	0
<10 & OR <2	3	15	21	6	1
<20 & OR <5	4	20	29	9	1
VSBY ≥5	7	25	27	7	1
≥50 & ≥5	5	11	9	1	0
NC & ≥10	4	9	6	1	0

592

WIND

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

6

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	6	2	0
<6 & OR <2	3	10	10	3	+
VSBY <2	2	8	9	2	+
<10 & OR <2	4	17	18	6	1
<20 & OR <5	6	30	32	9	1
VSBY ≥5	6	26	24	5	+
≥50 & ≥5	2	6	4	+	+
NC & ≥10	1	5	3	+	0

2749

7

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	4	5	+	0
<6 & OR <2	2	6	12	2	0
VSBY <2	2	4	7	1	0
<10 & OR <2	4	12	19	4	0
<20 & OR <5	5	23	27	5	+
VSBY ≥5	9	33	29	7	0
≥50 & ≥5	3	11	7	2	0
NC & ≥10	2	10	6	2	0

442

8

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	3	1	+
<6 & OR <2	2	7	8	2	+
VSBY <2	1	3	3	1	+
<10 & OR <2	3	13	15	4	+
<20 & OR <5	5	26	25	5	+
VSBY ≥5	9	36	35	5	0
≥50 & ≥5	3	10	7	1	0
NC & ≥10	3	9	6	1	0

462

9

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	6	9	9	1	0
<6 & OR <2	7	11	11	1	0
VSBY <2	6	10	10	1	0
<10 & OR <2	7	13	13	1	0
<20 & OR <5	10	22	21	2	0
VSBY ≥5	6	29	23	4	0
≥50 & ≥5	2	10	7	1	0
NC & ≥10	1	7	5	1	0

539

10

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	3	18	18	3	+
<6 & OR <2	3	22	23	5	+
VSBY <2	3	19	21	4	+
<10 & OR <2	4	26	26	6	+
<20 & OR <5	4	33	34	8	+
VSBY ≥5	4	20	16	3	0
≥50 & ≥5	1	6	5	1	0
NC & ≥10	1	3	2	+	0

1593

11

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	18	20	3	+
<6 & OR <2	4	21	25	4	1
VSBY <2	3	18	21	4	+
<10 & OR <2	5	25	30	6	1
<20 & OR <5	6	35	39	8	1
VSBY ≥5	3	16	15	3	+
≥50 & ≥5	+	2	1	+	0
NC & ≥10	+	1	1	+	0

2783

WIND

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

16

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	9	18	2	+
<6 & OR <2	2	11	22	4	+
VSBY <2	1	9	18	3	+
<10 & OR <2	3	16	28	4	+
<20 & OR <5	3	26	41	6	+
VSBY ≥5	3	22	29	6	+
≥50 & ≥5	1	4	5	1	0
NC & ≥10	+	3	3	1	0

1298

17

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	8	8	1	+
<6 & OR <2	1	11	11	1	+
VSBY <2	1	7	7	1	0
<10 & OR <2	2	17	19	2	+
<20 & OR <5	4	30	31	5	+
VSBY ≥5	5	33	32	3	+
≥50 & ≥5	2	8	7	+	0
NC & ≥10	1	7	5	+	0

1368

18

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	0
<6 & OR <2	1	4	5	1	0
VSBY <2	+	2	2	+	0
<10 & OR <2	1	9	11	2	0
<20 & OR <5	3	20	28	3	0
VSBY ≥5	5	38	43	3	0
≥50 & ≥5	2	13	8	+	0
NC & ≥10	2	11	6	+	0

2323

19

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	1	3	4	1	0
VSBY <2	1	2	1	+	0
<10 & OR <2	1	5	8	2	+
<20 & OR <5	3	14	24	6	+
VSBY ≥5	5	30	48	11	+
≥50 & ≥5	2	9	12	2	0
NC & ≥10	2	8	10	2	0

1605

20

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	6	6	+	0
<6 & OR <2	1	8	8	1	+
VSBY <2	1	7	6	1	+
<10 & OR <2	1	10	11	1	+
<20 & OR <5	2	16	18	3	+
VSBY ≥5	5	34	34	6	0
≥50 & ≥5	4	24	23	3	0
NC & ≥10	3	17	14	1	0

515

21

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	2	1	+
<6 & OR <2	1	3	5	1	+
VSBY <2	1	1	2	1	+
<10 & OR <2	1	6	12	3	+
<20 & OR <5	2	12	22	6	1
VSBY ≥5	6	32	43	8	+
≥50 & ≥5	4	20	21	3	+
NC & ≥10	4	17	18	2	+

2772

WIND

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

26

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	0	0
<6 & OR <2	+	2	2	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	8	7	1	+
<20 & OR <5	2	21	19	1	+
VSBY ≥5	9	50	37	2	0
≥50 & ≥5	6	23	12	+	0
NC & ≥10	6	22	11	+	0

1475

27

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	0
<6 & OR <2	+	2	3	1	0
VSBY <2	+	+	+	0	0
<10 & OR <2	1	5	12	3	+
<20 & OR <5	1	13	30	8	+
VSBY ≥5	3	26	53	15	1
≥50 & ≥5	1	8	13	5	+
NC & ≥10	1	7	11	4	+

4119

28

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	1	4	5	+	0
VSBY <2	+	1	1	+	0
<10 & OR <2	2	13	14	1	0
<20 & OR <5	4	27	29	2	0
VSBY ≥5	5	37	47	4	0
≥50 & ≥5	1	10	17	2	0
NC & ≥10	+	5	11	1	0

3962

29

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	+	1	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	1	2	+	+
<20 & OR <5	+	5	7	1	+
VSBY ≥5	5	38	46	6	+
≥50 & ≥5	5	33	39	4	+
NC & ≥10	5	29	33	3	+

2620

30

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	1	3	+	0
<20 & OR <5	1	4	9	1	0
VSBY ≥5	7	37	52	4	+
≥50 & ≥5	6	30	39	2	+
NC & ≥10	6	28	37	2	+

1217

31

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	1	2	+	0
<20 & OR <5	+	4	9	1	0
VSBY ≥5	1	26	67	5	0
≥50 & ≥5	1	22	51	4	0
NC & ≥10	1	20	49	4	0

1543

WIND

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

36

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	2	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	6	5	2	+
<20 & OR <5	1	14	10	3	+
VSBY ≥5	8	56	25	4	+
≥50 & ≥5	7	43	15	2	+
NC & ≥10	6	37	13	1	+

2587

37

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	1	0	+
VSBY <2	0	+	1	0	0
<10 & OR <2	+	3	4	1	1
<20 & OR <5	1	8	7	2	1
VSBY ≥5	10	49	31	5	1
≥50 & ≥5	9	41	23	3	+
NC & ≥10	9	36	22	2	+

537

38

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	1	1	+	+
VSBY <2	0	+	+	0	0
<10 & OR <2	+	4	4	1	+
<20 & OR <5	1	8	9	2	+
VSBY ≥5	8	48	38	3	+
≥50 & ≥5	7	39	26	1	0
NC & ≥10	7	34	24	1	0

1027

39

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	5	+	0
<20 & OR <5	+	6	12	1	0
VSBY ≥5	5	45	46	2	0
≥50 & ≥5	4	38	32	1	0
NC & ≥10	3	34	30	+	0

259

40

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	+	1	0	0
VSBY <2	+	0	+	0	0
<10 & OR <2	+	1	3	0	0
<20 & OR <5	1	4	9	+	0
VSBY ≥5	3	38	55	2	0
≥50 & ≥5	3	32	43	1	0
NC & ≥10	3	29	41	1	0

517

41

WIND SPEED (KNOTS)

LCC – VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	2	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	3	0
<20 & OR <5	0	1	12	5	0
VSBY ≥5	0	8	75	16	0
≥50 & ≥5	0	6	60	10	0
NC & ≥10	0	6	56	10	0

191

WIND

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

V

WIND SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
BY					
5	+	1	1	0	0
2	+	1	1	+	0
2	+	1	1	+	0
2	+	2	2	+	+
5	1	6	8	1	+
8	8	43	42	4	+
5	5	30	27	2	+
0	4	27	24	2	0

4168

X

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	5	1	+
<6 & OR <2	1	6	9	2	+
VSBY <2	1	5	7	1	+
<10 & OR <2	1	7	13	3	+
<20 & OR <5	2	11	25	7	1
VSBY ≥5	3	21	42	10	1
≥50 & ≥25	2	11	22	4	+
NC & ≥10	2	10	16	3	+

1380

1

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	11	2	0
<6 & OR <2	2	10	15	4	+
VSBY <2	2	8	12	3	0
<10 & OR <2	3	15	21	6	1
<20 & OR <5	4	20	29	9	1
VSBY ≥5	7	25	27	7	1
≥50 & ≥25	5	11	9	1	0
NC & ≥10	4	9	6	1	0

592

2

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	8	14	3	+
<6 & OR <2	2	11	21	5	+
VSBY <2	2	10	18	3	+
<10 & OR <2	3	14	30	6	1
<20 & OR <5	4	24	46	9	1
VSBY ≥5	3	17	25	4	+
≥50 & ≥25	1	2	3	+	0
NC & ≥10	+	1	2	+	0

950

3

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	14	9	1	+
<6 & OR <2	5	17	12	2	+
VSBY <2	5	15	10	2	+
<10 & OR <2	6	23	17	3	+
<20 & OR <5	9	33	23	5	+
VSBY ≥5	7	25	17	3	+
≥50 & ≥25	3	9	7	1	0
NC & ≥10	2	5	4	1	0

2636

4

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	5	11	11	3	+
<6 & OR <2	6	13	13	3	+
VSBY <2	5	11	12	3	+
<10 & OR <2	7	15	14	4	+
<20 & OR <5	8	20	20	4	+
VSBY ≥5	8	26	23	3	+
≥50 & ≥25	3	12	9	1	0
NC & ≥10	3	9	7	1	0

1344

5

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	5	13	12	2	+
<6 & OR <2	5	15	17	3	+
VSBY <2	5	14	15	2	+
<10 & OR <2	6	17	21	4	+
<20 & OR <5	10	28	30	5	+
VSBY ≥5	8	24	18	3	0
≥50 & ≥25	1	5	3	+	0
NC & ≥10	1	3	2	+	0

1255

9

WIND SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
0					
5	6	9	9	1	0
3	7	11	11	1	0
1	6	10	10	1	0
1	7	13	13	1	0
2	10	22	21	2	0
5	6	29	23	4	0
2	2	10	7	1	0
2	1	7	5	1	0

539

10

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	3	18	18	3	+
<6 & OR <2	3	22	23	5	+
VSBY <2	3	19	21	4	+
<10 & OR <2	4	26	26	6	+
<20 & OR <5	4	33	34	8	+
VSBY ≥5	4	20	16	3	0
≥50 & ≥25	1	6	5	1	0
NC & ≥10	1	3	2	+	0

1593

11

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	18	20	3	+
<6 & OR <2	4	21	25	4	1
VSBY <2	3	18	21	4	+
<10 & OR <2	5	25	30	6	1
<20 & OR <5	6	35	39	8	1
VSBY ≥5	3	15	15	3	+
≥50 & ≥25	+	2	1	+	0
NC & ≥10	+	1	1	+	0

2783

12

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	11	16	4	+
<6 & OR <2	2	14	21	5	+
VSBY <2	1	11	15	3	+
<10 & OR <2	3	19	28	7	+
<20 & OR <5	5	29	40	9	+
VSBY ≥5	4	21	24	4	+
≥50 & ≥25	1	3	2	+	0
NC & ≥10	+	2	1	+	0

1977

13

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	10	15	3	+
<6 & OR <2	2	13	20	4	+
VSBY <2	2	11	15	4	0
<10 & OR <2	3	19	29	6	+
<20 & OR <5	4	27	40	9	+
VSBY ≥5	3	20	27	5	+
≥50 & ≥25	1	4	3	1	0
NC & ≥10	1	3	3	+	0

1695

14

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	4	1	0
<6 & OR <2	1	7	7	2	+
VSBY <2	1	5	4	1	0
<10 & OR <2	2	14	15	3	+
<20 & OR <5	6	28	30	5	+
VSBY ≥5	8	35	34	4	+
≥50 & ≥25	2	6	5	1	0
NC & ≥10	2	5	4	+	0

2153

15

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	2	0	0
<6 & OR <2	1	7	4	+	0
VSBY <2	1	4	3	0	0
<10 & OR <2	2	12	6	+	0
<20 & OR <5	4	21	13	1	+
VSBY ≥5	5	39	39	1	+
≥50 & ≥25	2	19	26	1	0
NC & ≥10	1	3	7	0	0

775

19

WIND SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
5	+	1	1	+	0
2	1	3	4	1	0
2	1	2	1	+	0
2	1	5	8	2	+
3	3	14	24	6	+
5	5	30	48	11	+
2	2	9	12	2	0
2	2	8	10	2	0

1605

20

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	6	+	0
<6 & OR <2	1	8	8	1	+
VSBY <2	1	7	6	1	+
<10 & OR <2	1	10	11	1	+
<20 & OR <5	2	16	18	3	+
VSBY ≥5	5	34	34	6	0
≥50 & ≥25	4	24	23	3	0
NC & ≥10	3	17	14	1	0

515

21

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	2	1	+
<6 & OR <2	1	3	5	1	+
VSBY <2	1	1	2	1	+
<10 & OR <2	1	6	12	3	+
<20 & OR <5	2	12	22	6	1
VSBY ≥5	6	32	43	8	+
≥50 & ≥25	4	20	21	3	+
NC & ≥10	4	17	18	2	+

2772

22

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	+	+
<6 & OR <2	1	2	3	1	+
VSBY <2	+	1	1	+	0
<10 & OR <2	1	6	8	2	+
<20 & OR <5	2	12	17	5	+
VSBY ≥5	5	42	40	6	+
≥50 & ≥25	4	28	21	2	+
NC & ≥10	3	26	19	1	+

1499

23

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	1	0
<6 & OR <2	+	5	4	1	0
VSBY <2	+	3	2	1	0
<10 & OR <2	1	7	10	2	+
<20 & OR <5	2	13	19	3	+
VSBY ≥5	5	41	42	4	+
≥50 & ≥25	4	29	23	2	0
NC & ≥10	4	28	21	2	0

1068

24

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	1	0	0
<6 & OR <2	1	4	3	+	0
VSBY <2	1	1	1	+	0
<10 & OR <2	2	9	7	1	0
<20 & OR <5	3	17	14	2	0
VSBY ≥5	9	45	38	2	0
≥50 & ≥25	6	26	22	1	0
NC & ≥10	6	25	21	1	0

1091

25

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	+	0
<6 & OR <2	+	1	2	+	0
VSBY <2	+	+	+	+	0
<10 & OR <2	1	6	8	1	0
<20 & OR <5	2	14	16	2	+
VSBY ≥5	11	43	40	3	+
≥50 & ≥25	8	26	20	1	0
NC & ≥10	8	25	19	1	0

1180

29

WIND SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
0					
0		+	+	+	+
1	+	+	1	+	+
1	+	+	+	+	+
2	+	1	2	+	+
7	+	5	7	1	+
46	5	38	46	6	+
39	5	33	39	4	+
33	5	29	33	3	+

2620

30

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	1	3	+	0
<20 & OR <5	1	4	9	1	0
VSBY ≥5	7	37	52	4	+
≥50 & ≥25	6	30	39	2	+
NC & ≥10	6	28	37	2	+

1217

31

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	1	2	+	0
<20 & OR <5	+	4	9	1	0
VSBY ≥5	1	26	67	5	0
≥50 & ≥25	1	22	51	4	0
NC & ≥10	1	20	49	4	0

1643

32

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	1	7	1	0
<20 & OR <5	+	4	20	2	0
VSBY ≥5	1	19	72	7	0
≥50 & ≥25	1	14	45	3	0
NC & ≥10	1	13	43	3	0

4352

33

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	7	+	0
<20 & OR <5	1	6	20	2	0
VSBY ≥5	3	25	67	4	0
≥50 & ≥25	2	13	26	2	0
NC & ≥10	2	12	24	2	0

1725

34

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	3	1	+
VSBY <2	+	+	1	+	+
<10 & OR <2	+	4	8	3	+
<20 & OR <5	1	9	17	7	+
VSBY ≥5	6	33	41	11	+
≥50 & ≥25	5	25	25	5	+
NC & ≥10	4	22	20	3	+

5552

35

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	+	3	5	2	+
<20 & OR <5	1	8	10	4	1
VSBY ≥5	9	47	32	5	+
≥50 & ≥25	8	38	22	3	+
NC & ≥10	7	34	19	2	+

6042

39

WIND SPEED (KNOTS)	0-3	4-10	11-21	22-33	≥34
)					
0	0	+	0	0	0
0	0	1	+	0	0
0	0	0	0	0	0
0	0	2	5	+	0
+	+	6	12	1	0
5	5	45	46	2	0
4	4	38	32	1	0
3	3	34	30	+	0

259

40

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	+	1	0	0
VSBY <2	+	0	+	0	0
<10 & OR <2	+	1	3	0	0
<20 & OR <5	1	4	9	+	0
VSBY ≥5	3	38	55	2	0
≥50 & ≥25	3	32	43	1	0
NC & ≥10	3	29	41	1	0

517

41

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	2	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	3	0
<20 & OR <5	0	1	12	5	0
VSBY ≥5	0	8	75	16	0
≥50 & ≥25	0	6	60	10	0
NC & ≥10	0	6	56	10	0

191

42

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	0	0
<6 & OR <2	+	2	4	1	+
VSBY <2	+	+	1	1	+
<10 & OR <2	+	7	16	3	+
<20 & OR <5	+	17	35	4	+
VSBY ≥5	1	34	58	4	+
≥50 & ≥25	+	11	10	+	0
NC & ≥10	+	9	8	+	0

658

43

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	1	+
<6 & OR <2	+	1	1	1	+
VSBY <2	0	+	0	1	+
<10 & OR <2	+	3	4	2	+
<20 & OR <5	1	8	10	2	+
VSBY ≥5	12	55	28	3	+
≥50 & ≥25	10	45	16	1	0
NC & ≥10	9	43	16	1	0

742

44

WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	2	+	0
VSBY <2	+	+	1	+	0
<10 & OR <2	+	4	6	1	0
<20 & OR <5	1	11	12	1	+
VSBY ≥5	9	49	36	2	0
≥50 & ≥25	8	35	23	1	0
NC & ≥10	7	32	20	1	0

2397

45

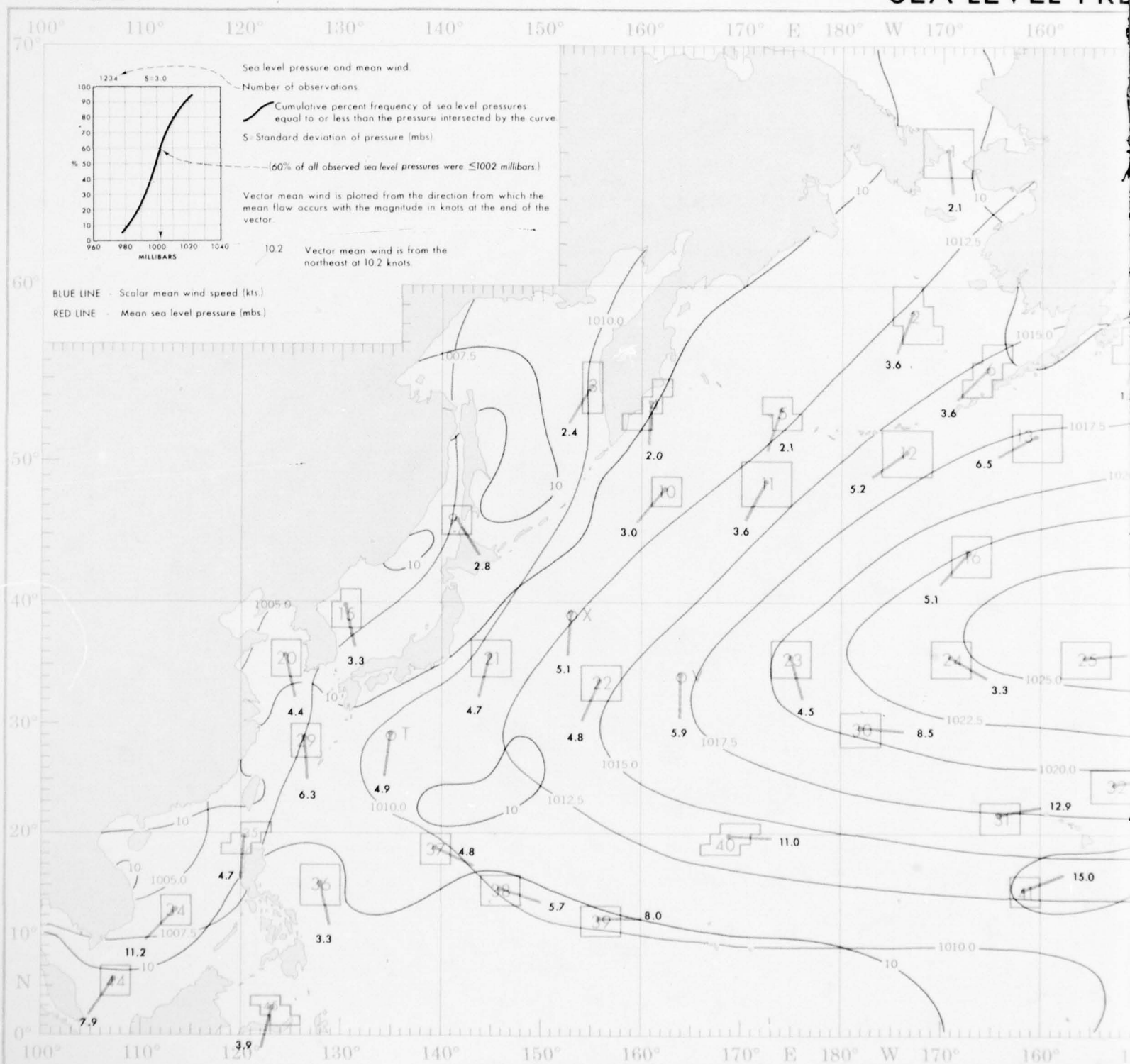
WIND SPEED (KNOTS) LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	2	3	2	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	9	2	0	0
<20 & OR <5	3	11	5	0	0
VSBY ≥5	16	61	22	0	0
≥50 & ≥25	11	48	17	0	0
NC & ≥10	11	47	17	0	0

64

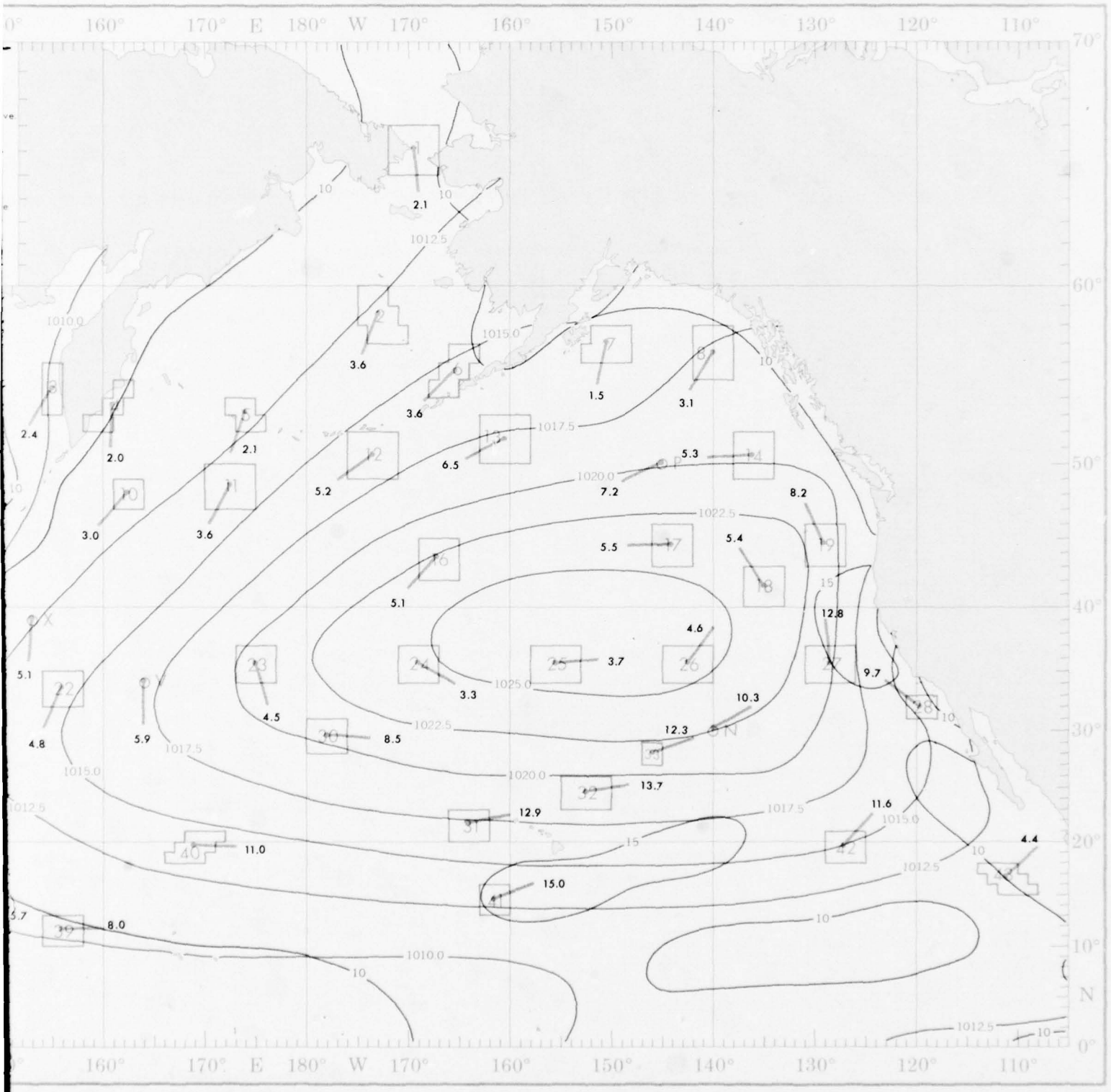
the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

SEA LEVEL PRE



SEA LEVEL PRESSURE AND MEAN WIND



SEA LEVEL PRESSURE



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

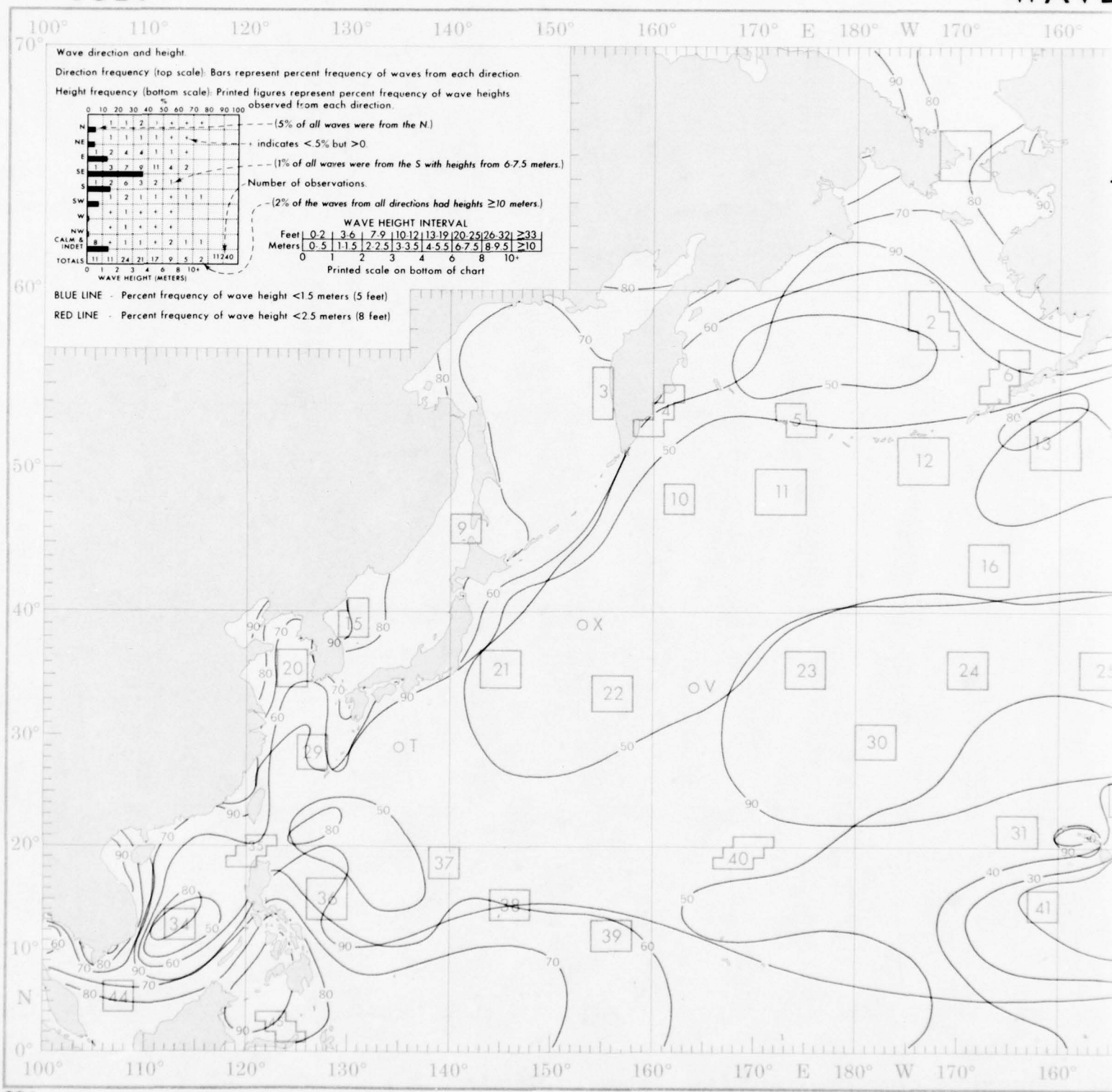
JULY



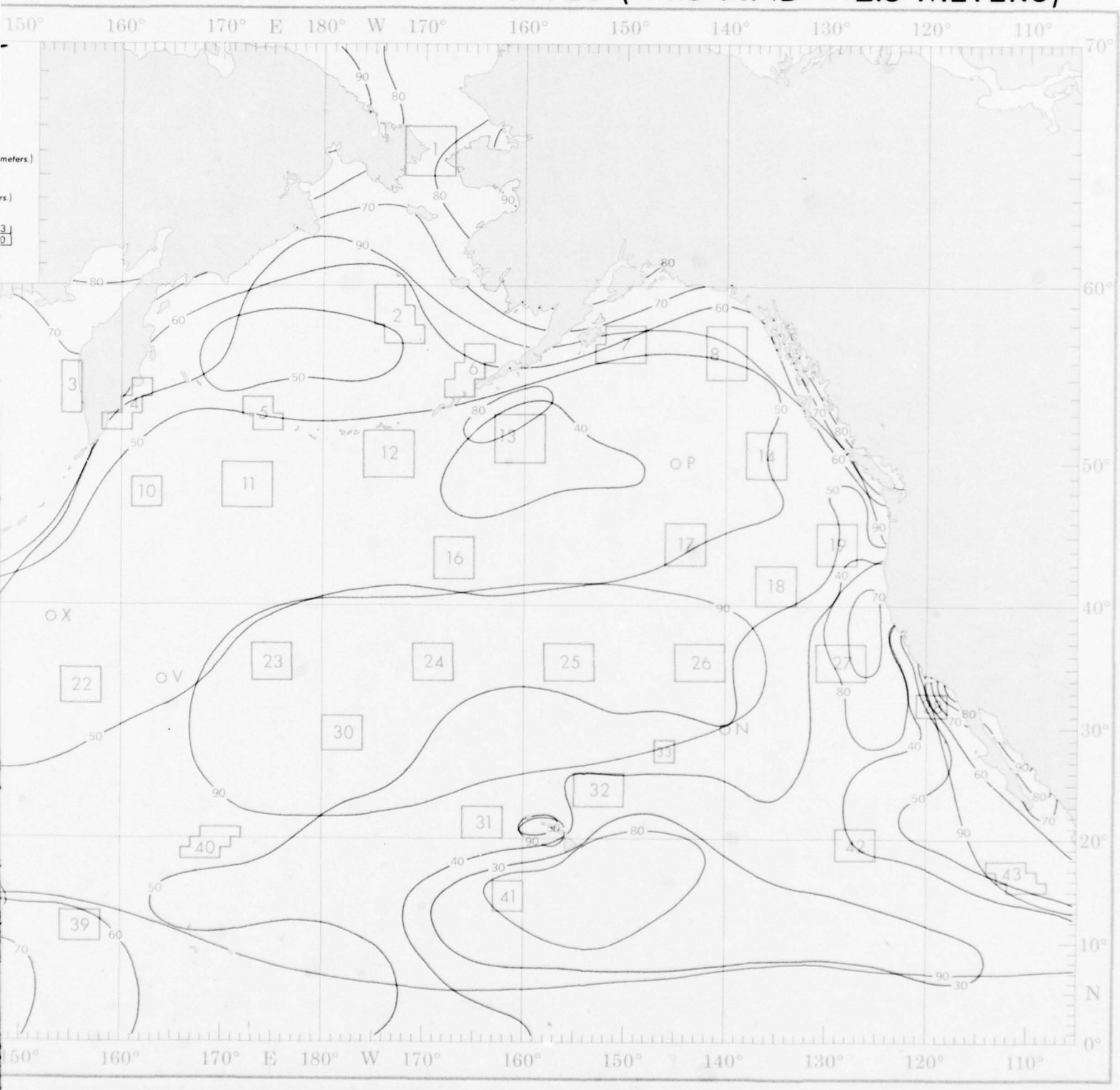
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

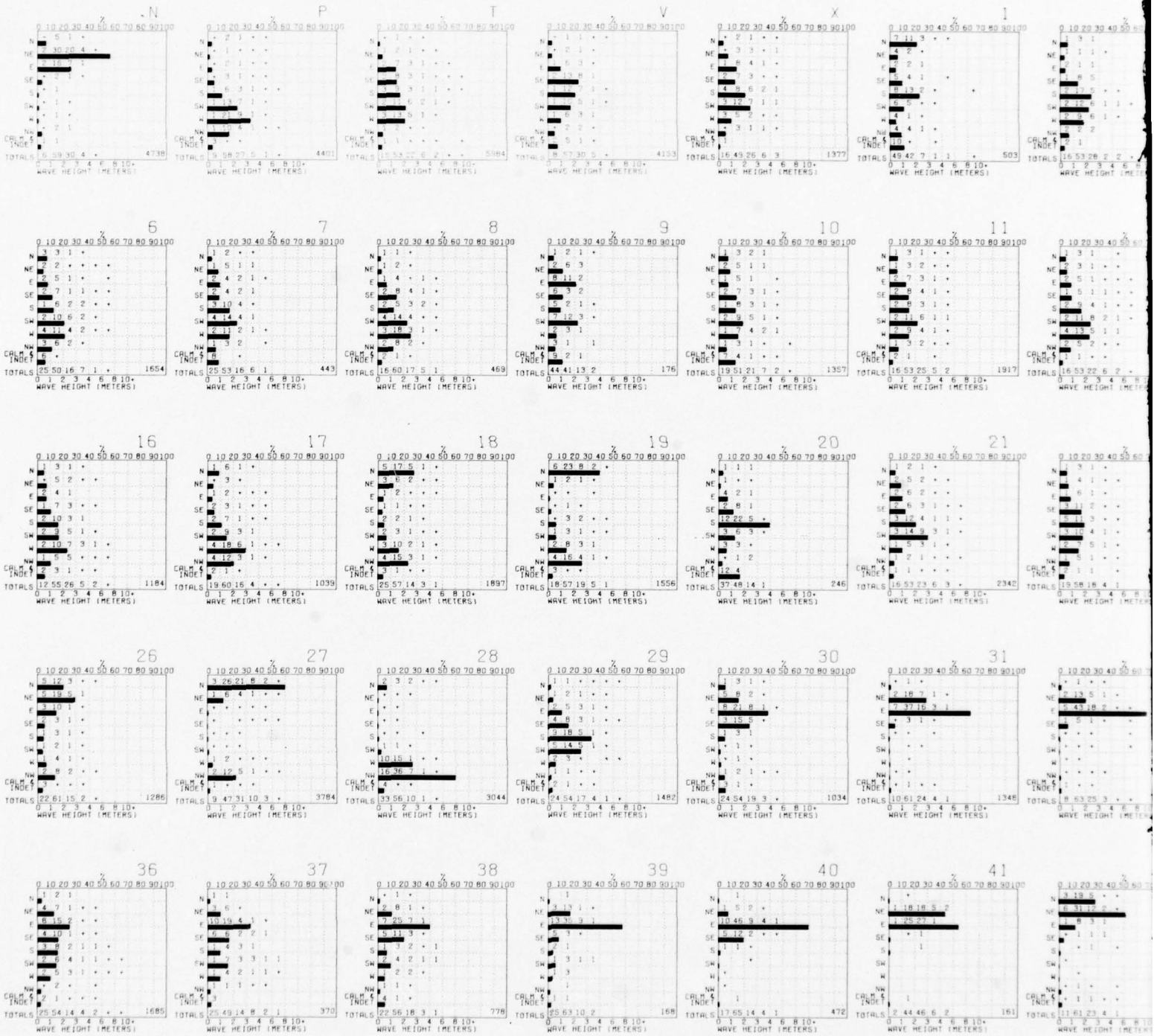
WAVE


Wave direction and height.
Direction frequency (top scale): Bars represent percent frequency of waves from each direction.
Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.
(5% of all waves were from the N.)
+ indicates < 5% but > 0.
(1% of all waves were from the S with heights from 6-7.5 meters.)
Number of observations.
(2% of the waves from all directions had heights ≥10 meters.)
WAVE HEIGHT INTERVAL
Feet 0-2 | 3-6 | 7-9 | 10-12 | 13-19 | 20-25 | 26-32 | ≥33
Meters 0-.5 | 1-1.5 | 2-2.5 | 3-3.5 | 4-5.5 | 6-7.5 | 8-9.5 | ≥10
Printed scale on bottom of chart
WAVE HEIGHT (METERS)
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)
RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

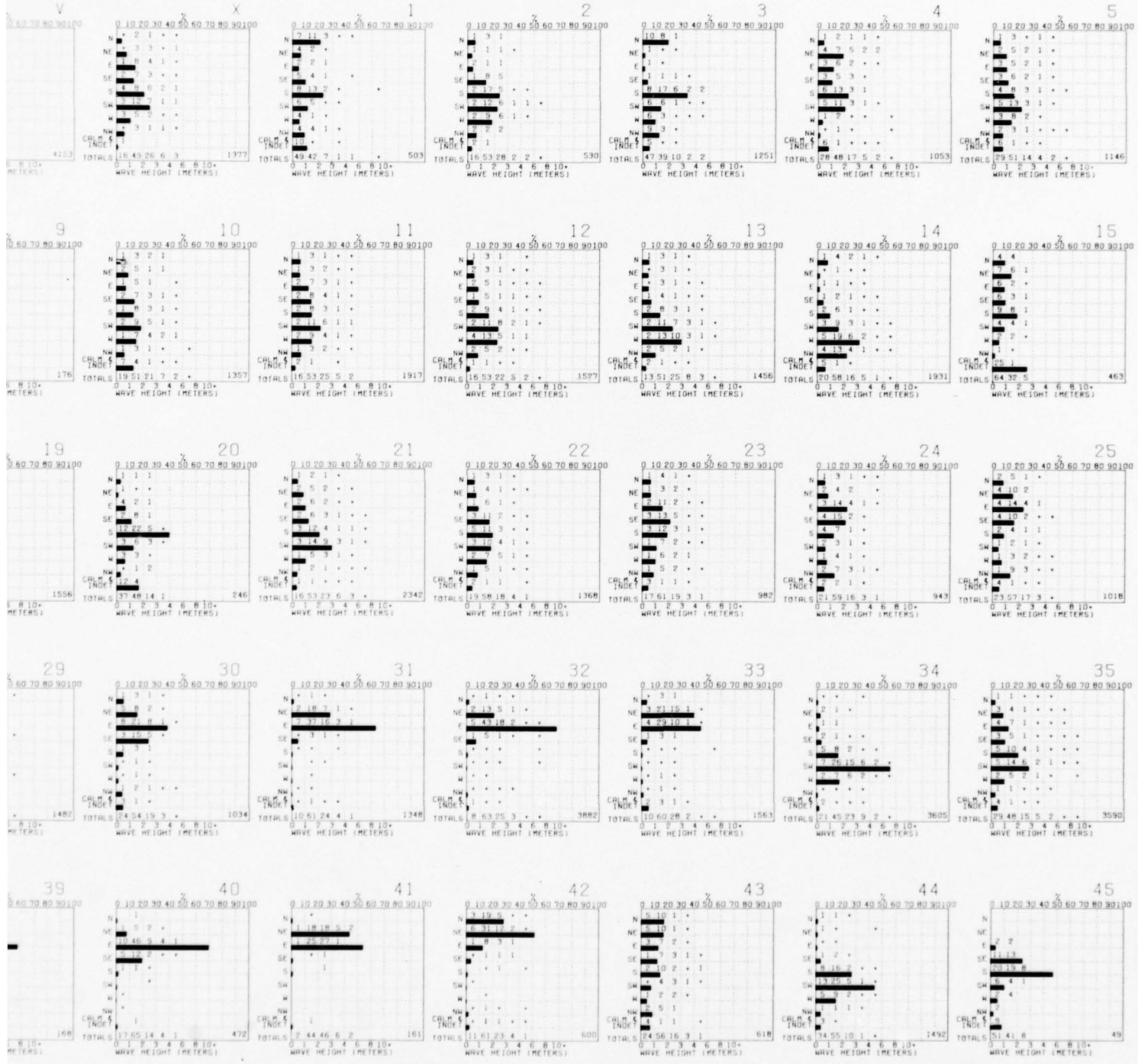
WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT



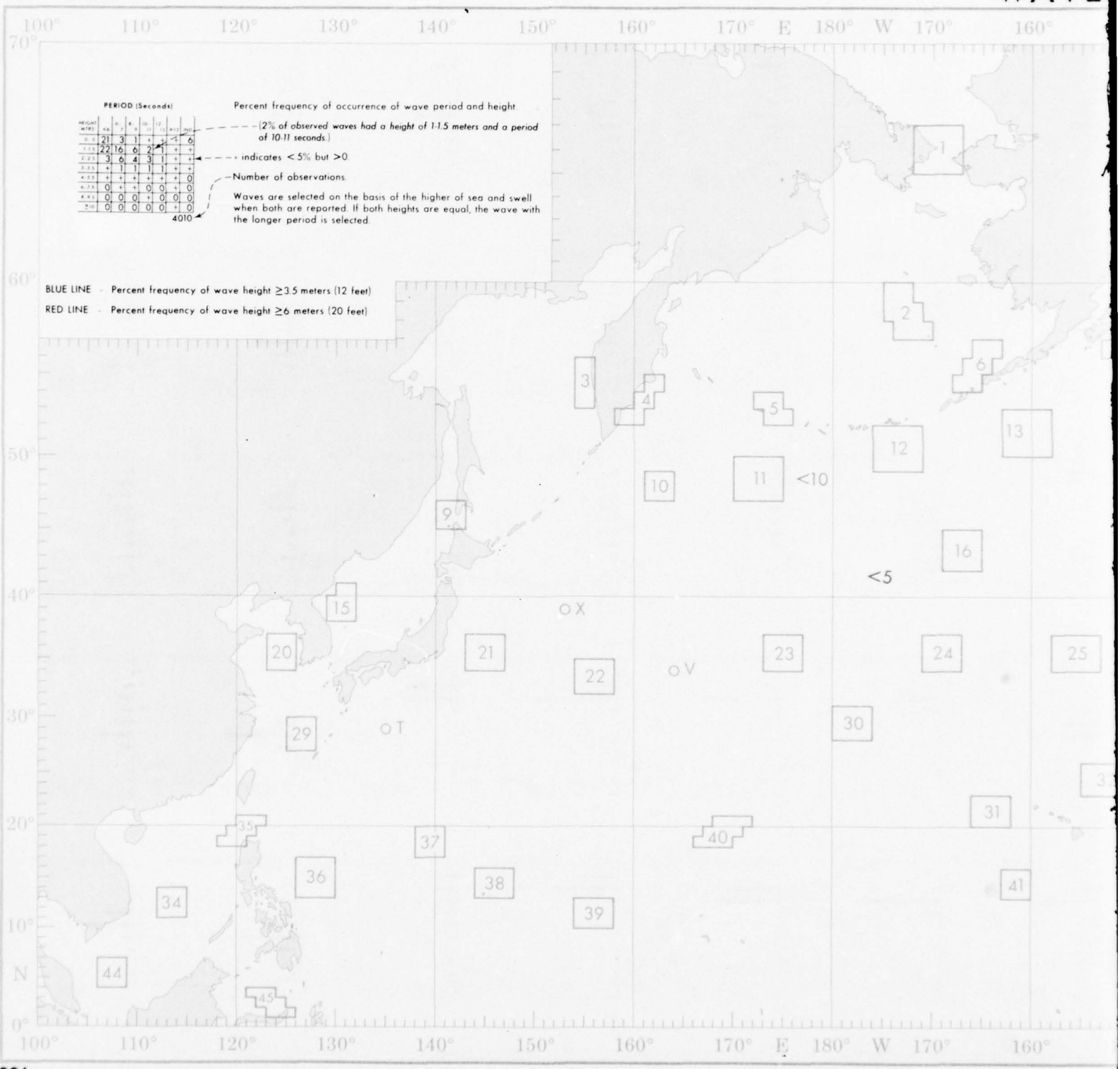
Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi



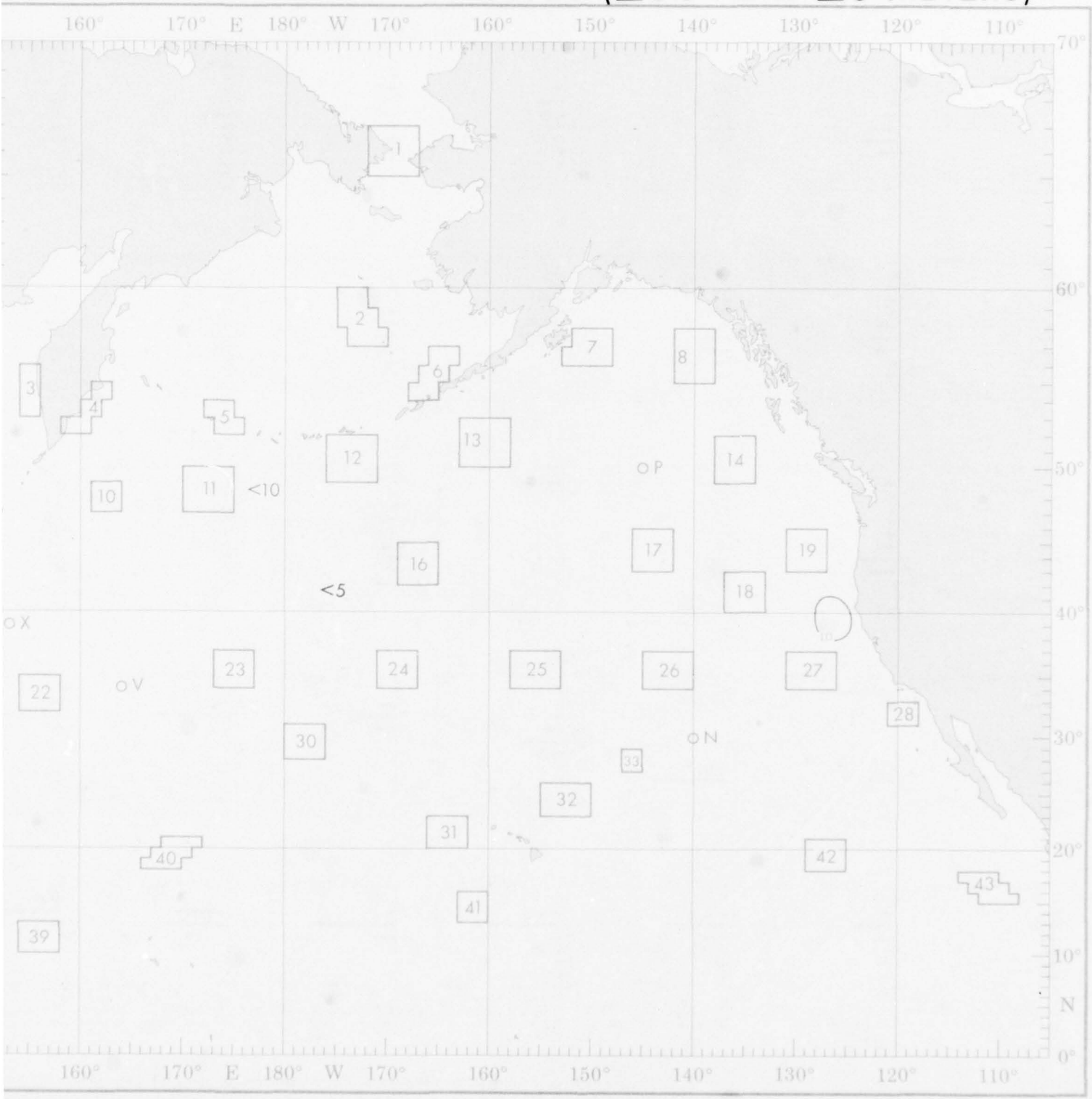
objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY

WAVE


PERIOD (Seconds)
HEIGHT METERS
<6
6-7
8-9
10-11
12
13-14
>14
2ND
0-.5
21 3 1 + + + 6
.5-1.5
22 16 6 2 1 + +
1.5-2.5
3 6 4 3 1 + +
2.5-3.5
+ 1 1 1 1 + +
3.5-4.5
+ + + + + + 0
4.5-6.0
0 + + 0 0 + 0
6.0-9.0
0 0 0 + 0 0 0
9.0-12.0
0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
<10
<5
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	1	+	0	0	1
1-1.5	21	28	8	+	0	0	1
2-2.5	3	20	7	+	0	+	0
3-3.5	+	2	2	+	+	0	0
4-5.5	0	0	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4744

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	1	+	0	0	3
1-1.5	19	25	8	5	1	+	+
2-2.5	3	13	8	3	+	0	+
3-3.5	+	2	2	1	+	+	0
4-5.5	+	1	+	+	+	0	0
6-7.5	0	+	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4427

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	5	3	+	0	0	6
1-1.5	2	10	21	2	+	0	17
2-2.5	1	3	11	2	1	+	4
3-3.5	+	+	2	2	1	+	1
4-5.5	+	+	1	1	1	+	+
6-7.5	0	0	+	+	+	+	+
8-9.5	0	0	+	+	+	+	+
≥10	0	0	0	0	0	0	0

6002

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	2
1-1.5	18	23	9	2	1	0	5
2-2.5	3	16	8	2	+	+	1
3-3.5	+	2	2	1	+	0	+
4-5.5	0	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4163

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	10	2	+	0	0	4
1-1.5	+	12	24	+	0	0	11
2-2.5	+	4	18	1	+	+	2
3-3.5	0	1	4	1	0	0	0
4-5.5	0	0	3	1	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1377

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	38	3	1	1	0	0	12
1-1.5	25	6	+	+	1	0	4
2-2.5	3	2	+	0	+	0	1
3-3.5	1	+	0	+	0	0	0
4-5.5	0	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

571

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	2	+	+	0	0	6
1-1.5	27	17	2	+	+	0	1
2-2.5	4	6	4	2	+	0	+
3-3.5	+	2	3	1	1	+	0
4-5.5	0	+	1	+	+	0	0
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1712

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	4	1	1	0	0	9
1-1.5	21	14	11	2	2	0	1
2-2.5	4	6	4	+	+	1	1
3-3.5	2	1	2	0	0	+	0
4-5.5	+	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

454

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	+	+	0	0	2
1-1.5	28	17	6	3	2	+	+
2-2.5	3	6	2	4	1	0	+
3-3.5	+	3	1	1	0	0	0
4-5.5	+	1	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

504

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	1	0	1	0	0	28
1-1.5	20	2	2	0	1	0	14
2-2.5	3	4	1	0	0	0	5
3-3.5	0	0	1	0	0	0	1
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

187

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	2	+	0	0	7
1-1.5	14	22	10	1	+	+	4
2-2.5	2	8	8	1	+	+	1
3-3.5	+	1	5	+	+	0	+
4-5.5	0	0	1	+	0	0	+
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1377

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	2	1	+	0	0	2
1-1.5	22	18	8	2	+	+	1
2-2.5	3	8	11	2	+	0	+
3-3.5	+	1	2	1	1	+	+
4-5.5	0	+	+	1	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1973

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	1	1	0	0	2
1-1.5	18	22	7	1	1	+	4
2-2.5	3	14	6	2	+	+	1
3-3.5	1	2	1	+	1	+	+
4-5.5	0	+	1	+	0	0	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1209

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	+	+	0	0	3
1-1.5	29	18	6	2	1	+	1
2-2.5	2	6	6	1	+	+	+
3-3.5	1	1	1	1	+	0	0
4-5.5	+	+	0	+	+	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1077

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	3	1	+	0	0	4
1-1.5	31	16	5	1	1	0	1
2-2.5	3	5	4	1	+	+	+
3-3.5	1	1	1	+	+	0	0
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1965

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	3	+	+	0	0	3
1-1.5	28	18	7	2	+	+	1
2-2.5	5	8	3	1	+	+	+
3-3.5	1	2	1	1	0	+	+
4-5.5	+	1	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1583

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	25	3	+	+	0	0	13
1-1.5	24	15	2	+	0	0	4
2-2.5	3	7	2	0	0	+	0
3-3.5	0	0	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

264

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	+	+	0	0	3
1-1.5	24	19	4	1	+	+	2
2-2.5	3	9	8	2	+	+	+
3-3.5	+	1	2	1	1	+	+
4-5.5	+	1	+	1	+	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2445

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	1	+	0	0	4
1-1.5	30	20	5	2	1	+	1
2-2.5	3	5	4	1	+	+	+
3-3.5	+	+	1	+	+	+	+
4-5.5	0	+	0	0	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1336

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	19	19	5	1	1	+	1
2-2.5	6	12	9	3	1	+	+
3-3.5	1	3	3	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3849

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	25	3	1	+	0	0	4
1-1.5	36	12	5	1	+	0	+
2-2.5	4	3	2	1	+	+	+
3-3.5	+	+	+	+	+	+	+
4-5.5	+	+	0	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3096

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	2	1	+	0	0	3
1-1.5	24	20	5	1	1	0	2
2-2.5	3	6	5	2	+	+	+
3-3.5	+	1	1	1	1	+	0
4-5.5	+	+	+	0	+	+	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1511

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	1	+	0	0	4
1-1.5	25	16	6	2	1	+	2
2-2.5	4	6	5	2	+	+	+
3-3.5	+	1	1	+	+	0	0
4-5.5	+	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1064

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	+
1-1.5	27	23	6	1	1	+	1
2-2.5	5	9	6	2	1	1	+
3-3.5	1	1	1	1	+	0	+
4-5.5	+	1	+	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1365

36

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	3	1	+	0	0	2
1-1.5	25	21	4	1	+	+	+
2-2.5	3	6	3	1	+	+	+
3-3.5	+	1	1	+	1	+	+
4-5.5	0	+	1	+	+	+	+
6-7.5	0	+	+	+	+	0	0
8-9.5	0	+	+	0	0	+	0
≥10	0	0	0	0	0	0	0

1749

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	2	0	0	0	0	5
1-1.5	22	18	4	1	2	+	0
2-2.5	3	6	2	1	+	1	0
3-3.5	2	2	2	1	1	1	+
4-5.5	0	1	1	0	+	+	0
6-7.5	0	0	1	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

392

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	1	+	0	0	4
1-1.5	25	18	6	2	1	+	2
2-2.5	5	7	4	1	+	+	+
3-3.5	+	1	1	+	+	+	0
4-5.5	0	0	+	1	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

813

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	24	1	1	1	0	0	2
1-1.5	31	19	8	1	0	0	2
2-2.5	1	1	6	1	1	0	1
3-3.5	0	0	1	2	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

174

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	2	+	0	0	0	1
1-1.5	30	25	5	1	1	0	1
2-2.5	3	4	4	2	0	0	0
3-3.5	1	2	1	0	0	0	0
4-5.5	+	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

484

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	1	0	0	0	0	0
1-1.5	19	18	4	0	0	1	1
2-2.5	6	23	14	3	0	0	0
3-3.5	0	2	2	1	1	1	0
4-5.5	1	0	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

161

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

V

PERIOD (SECONDS)						
6-	8-	10-	12-			
6	7	9	11	13	>13	IND
5	1	+	+	0	0	2
8	23	9	2	1	0	5
3	16	8	2	+	+	1
+	2	2	1	+	0	+
0	+	+	+	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

4163

X

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	10	2	+	0	0	4
1-1.5	+	12	24	+	0	0	11
2-2.5	+	4	18	1	+	+	2
3-3.5	0	1	4	1	0	0	0
4-5.5	0	0	3	1	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1377

1

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	38	3	1	1	0	0	12
1-1.5	25	6	+	+	1	0	4
2-2.5	3	2	+	0	+	0	1
3-3.5	1	+	0	+	0	0	0
4-5.5	0	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

571

2

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	4	+	1	0	0	3
1-1.5	17	28	4	+	0	0	2
2-2.5	4	17	4	1	0	0	0
3-3.5	0	1	0	+	1	0	1
4-5.5	0	0	+	+	1	0	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

538

3

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	45	4	1	+	0	0	8
1-1.5	16	12	1	+	0	0	2
2-2.5	2	4	1	+	0	0	1
3-3.5	+	+	1	0	+	0	+
4-5.5	+	0	1	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1541

4

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	2	1	1	0	0	11
1-1.5	19	11	4	2	1	+	9
2-2.5	4	5	3	1	+	+	3
3-3.5	+	1	1	+	+	+	1
4-5.5	+	+	1	0	+	+	1
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1096

5

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	4	2	1	0	0	10
1-1.5	21	12	11	1	+	+	3
2-2.5	2	5	4	+	+	+	1
3-3.5	+	1	1	+	0	+	1
4-5.5	0	1	1	0	+	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1207

9

PERIOD (SECONDS)						
6-	8-	10-	12-			
6	7	9	11	13	>13	IND
18	1	0	1	0	0	28
10	2	2	0	1	0	14
3	4	1	0	0	0	5
0	0	1	0	0	0	1
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

187

10

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	2	+	0	0	7
1-1.5	14	22	10	1	+	+	4
2-2.5	2	8	8	1	+	+	1
3-3.5	+	1	5	+	+	0	+
4-5.5	0	0	1	+	0	0	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1377

11

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	2	1	+	0	0	2
1-1.5	22	18	8	2	+	+	1
2-2.5	3	8	11	2	+	0	+
3-3.5	+	1	2	1	1	+	+
4-5.5	0	+	+	1	1	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1973

12

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	2	1	+	0	0	2
1-1.5	21	20	7	1	+	0	2
2-2.5	3	8	7	3	+	0	+
3-3.5	1	2	2	1	+	0	+
4-5.5	+	1	1	1	+	+	0
6-7.5	0	0	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1566

13

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	1	+	0	0	3
1-1.5	23	19	5	2	1	+	1
2-2.5	3	10	8	2	+	1	1
3-3.5	1	3	3	1	1	0	+
4-5.5	0	+	1	1	+	0	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1498

14

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	1	+	0	0	5
1-1.5	25	20	6	2	+	+	2
2-2.5	3	6	5	1	+	+	+
3-3.5	+	1	2	1	+	0	+
4-5.5	+	1	+	+	+	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1973

15

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	37	1	0	+	0	0	26
1-1.5	29	2	1	0	0	0	1
2-2.5	4	1	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

470

19

PERIOD (SECONDS)						
6-	8-	10-	12-			
6	7	9	11	13	>13	IND
3	3	+	+	0	0	3
8	18	7	2	+	+	1
5	8	3	1	+	+	+
1	2	1	1	0	+	+
+	1	+	+	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

1583

20

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	25	3	+	+	0	0	13
1-1.5	24	15	2	+	0	0	4
2-2.5	3	7	2	0	0	+	0
3-3.5	0	0	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

264

21

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	+	+	0	0	3
1-1.5	24	19	4	1	+	+	2
2-2.5	3	9	8	2	+	+	+
3-3.5	+	1	2	1	1	+	+
4-5.5	+	1	+	1	+	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2445

22

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	1	1	+	0	0	2
1-1.5	26	19	6	2	1	+	1
2-2.5	3	6	5	2	1	+	1
3-3.5	1	1	1	1	+	+	+
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1412

23

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	1	+	+	0	0	3
1-1.5	28	19	6	2	2	0	2
2-2.5	4	6	5	2	+	+	1
3-3.5	+	1	1	+	+	0	+
4-5.5	0	+	+	+	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1009

24

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	+	+	0	0	3
1-1.5	27	16	8	3	1	0	2
2-2.5	3	5	3	2	1	+	1
3-3.5	+	1	1	1	0	+	0
4-5.5	0	+	+	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

976

25

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	3	+	+	0	0	4
1-1.5	28	16	7	2	1	+	1
2-2.5	4	5	4	2	1	+	+
3-3.5	+	1	1	+	+	+	+
4-5.5	+	0	0	+	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1053

29

PERIOD (SECONDS)						
6-	8-	10-	12-			
6	7	9	11	13	>13	IND
0	2	1	+	0	0	3
4	20	5	1	1	0	2
3	6	5	2	+	+	+
+	1	1	1	+	+	+
+	+	0	+	0	0	0
0	0	+	+	0	0	0
0	0	0	0	0	0	0

1511

30

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	19	2	1	+	0	0	4
1-1.5	25	16	6	2	1	+	2
2-2.5	4	6	5	2	+	+	+
3-3.5	+	1	1	+	+	0	0
4-5.5	+	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1064

31

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	+
1-1.5	27	23	6	1	1	+	1
2-2.5	5	9	6	2	1	+	+
3-3.5	1	1	1	1	+	0	+
4-5.5	+	1	+	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1365

32

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	+	0	0	1
1-1.5	32	21	6	1	1	+	1
2-2.5	5	11	7	2	1	+	+
3-3.5	+	1	1	+	+	+	+
4-5.5	+	+	+	+	0	0	+
6-7.5	0	+	0	+	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3925

33

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	+	0	0	2
1-1.5	26	20	8	1	+	+	3
2-2.5	3	13	10	1	+	+	1
3-3.5	+	1	1	+	+	0	+
4-5.5	0	+	+	0	0	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1586

34

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	20	2	+	+	0	0	2
1-1.5	22	16	4	+	+	+	+
2-2.5	4	8	7	2	1	+	+
3-3.5	1	3	2	1	+	+	+
4-5.5	+	1	1	+	+	+	0
6-7.5	0	+	+	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3757

35

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	25	2	1	+	0	0	5
1-1.5	23	17	4	1	+	+	1
2-2.5	2	5	5	2	+	+	+
3-3.5	1	1	1	1	1	+	+
4-5.5	+	+	+	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	0	+	+	0
≥10	0	0	0	0	0	0	0

3772

39

PERIOD (SECONDS)						
6-	8-	10-	12-			
6	7	9	11	13	>13	IND
4	1	1	1	0	0	2
1	19	8	1	0	0	2
1	1	6	1	1	0	1
0	0	1	2	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0
0	0	0	0	0	0	0

174

40

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	2	+	0	0	0	1
1-1.5	30	25	5	1	1	0	1
2-2.5	3	4	4	2	0	0	0
3-3.5	1	2	1	0	0	0	0
4-5.5	+	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

484

41

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	1	0	0	0	0	0
1-1.5	19	18	4	0	0	1	1
2-2.5	6	23	14	3	0	0	0
3-3.5	0	2	2	1	1	1	0
4-5.5	1	0	0	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

161

42

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	0	0	0	+
1-1.5	31	20	6	1	+	+	2
2-2.5	4	10	6	+	+	+	1
3-3.5	+	2	1	+	+	0	+
4-5.5	0	+	+	+	0	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

607

43

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	1	1	0	0	7
1-1.5	25	16	6	3	1	1	1
2-2.5	3	5	5	1	+	+	+
3-3.5	+	+	1	+	0	+	1
4-5.5	0	0	+	0	+	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

655

44

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	30	1	+	+	0	0	6
1-1.5	31	15	3	0	1	0	2
2-2.5	2	5	2	1	+	+	+
3-3.5	+	1	+	0	0	0	0
4-5.5	+	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1584

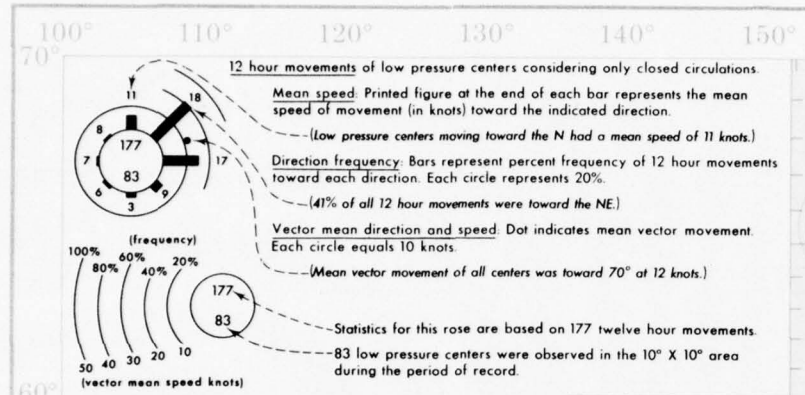
45

HEIGHT (MTRS)	PERIOD (SECONDS)						
	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	38	6	0	0	0	0	8
1-1.5	26	10	4	0	0	0	0
2-2.5	2	6	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

50

ent the objective compilation of available data for specified areas without regard to suspected biases.
nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

JULY



12 hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 11 knots.)

Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.

(41% of all 12 hour movements were toward the NE.)

Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.

(Mean vector movement of all centers was toward 70° at 12 knots.)

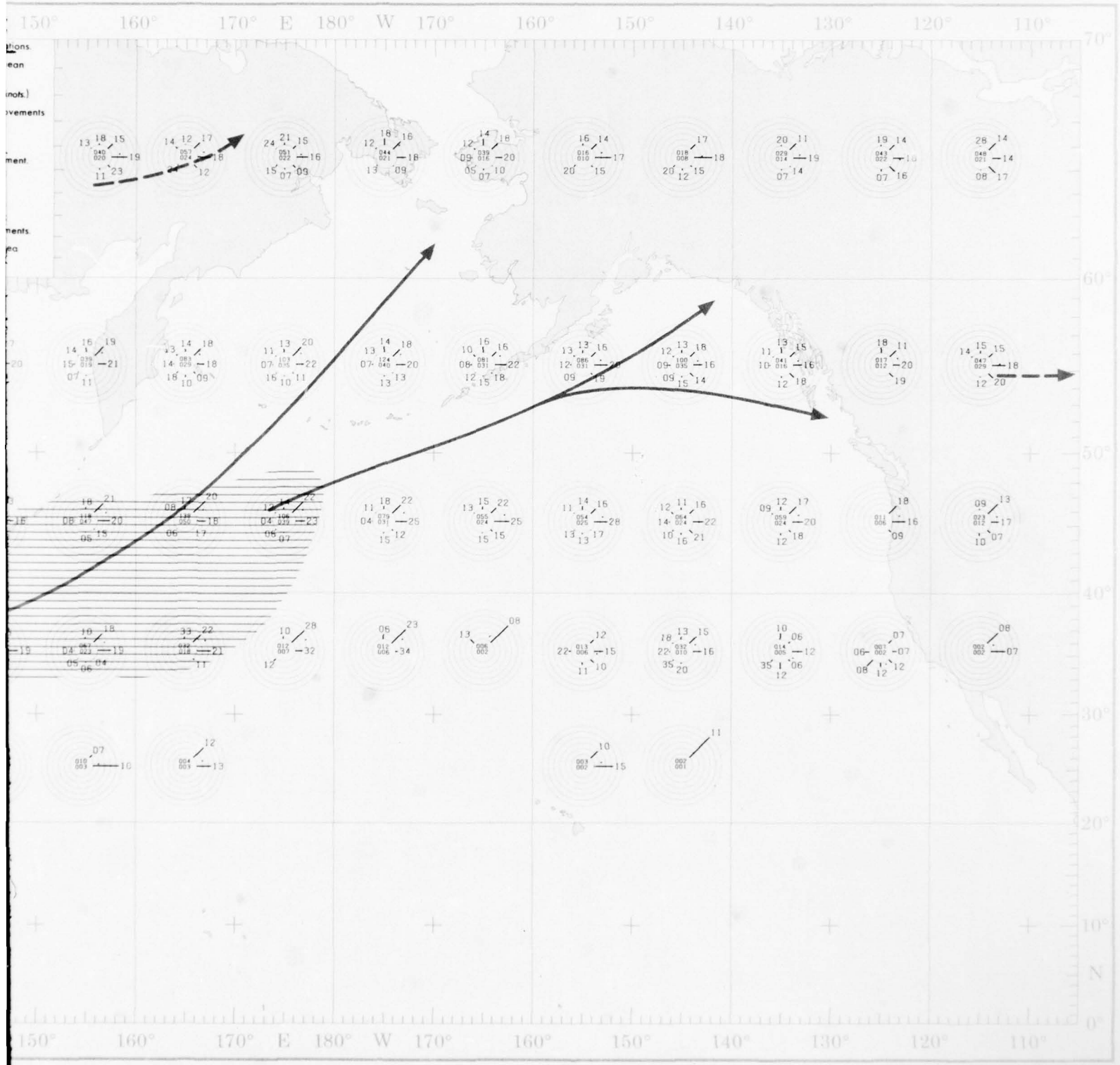
Statistics for this rose are based on 177 twelve hour movements.

83 low pressure centers were observed in the 10° X 10° area during the period of record.

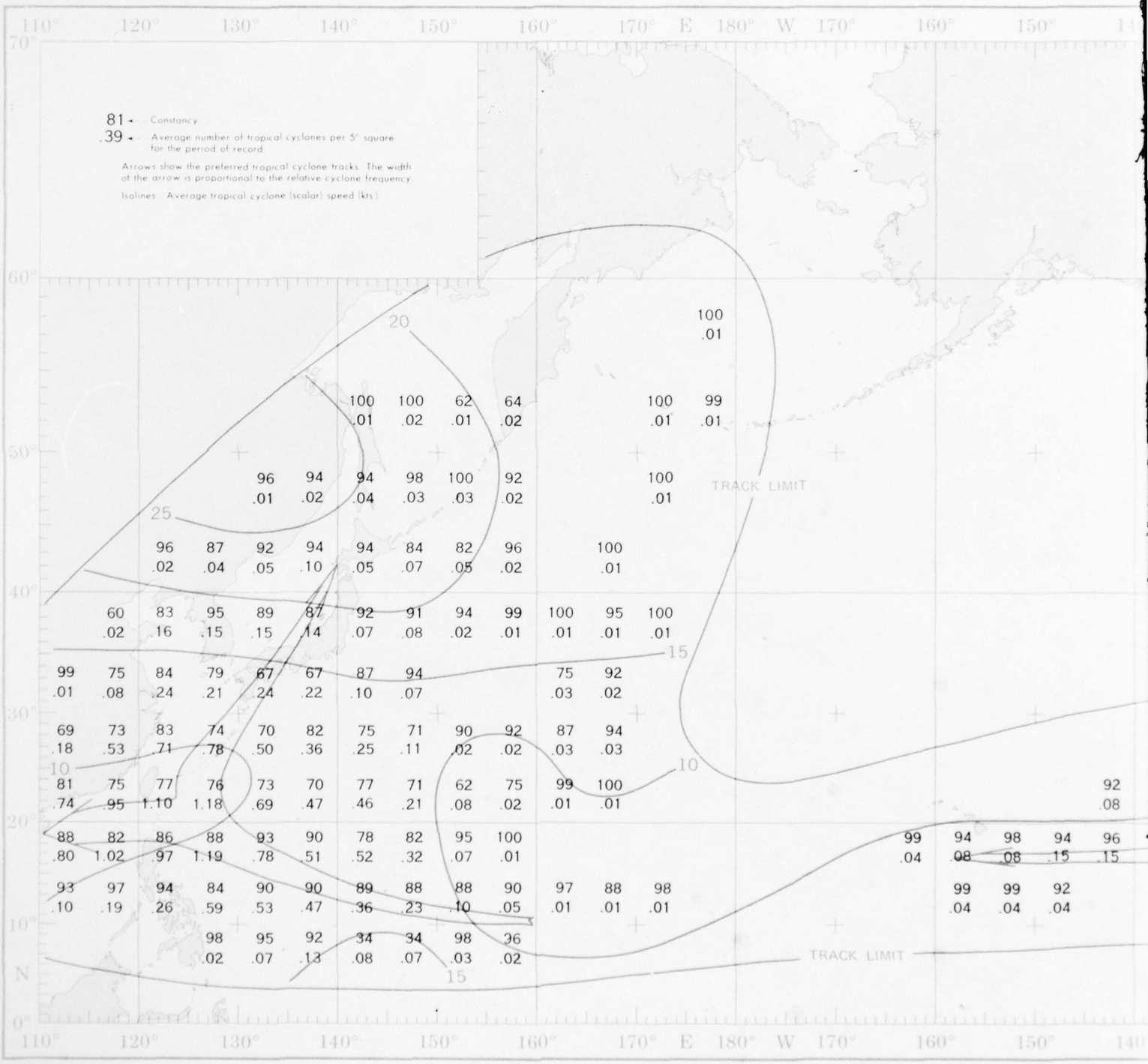
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)

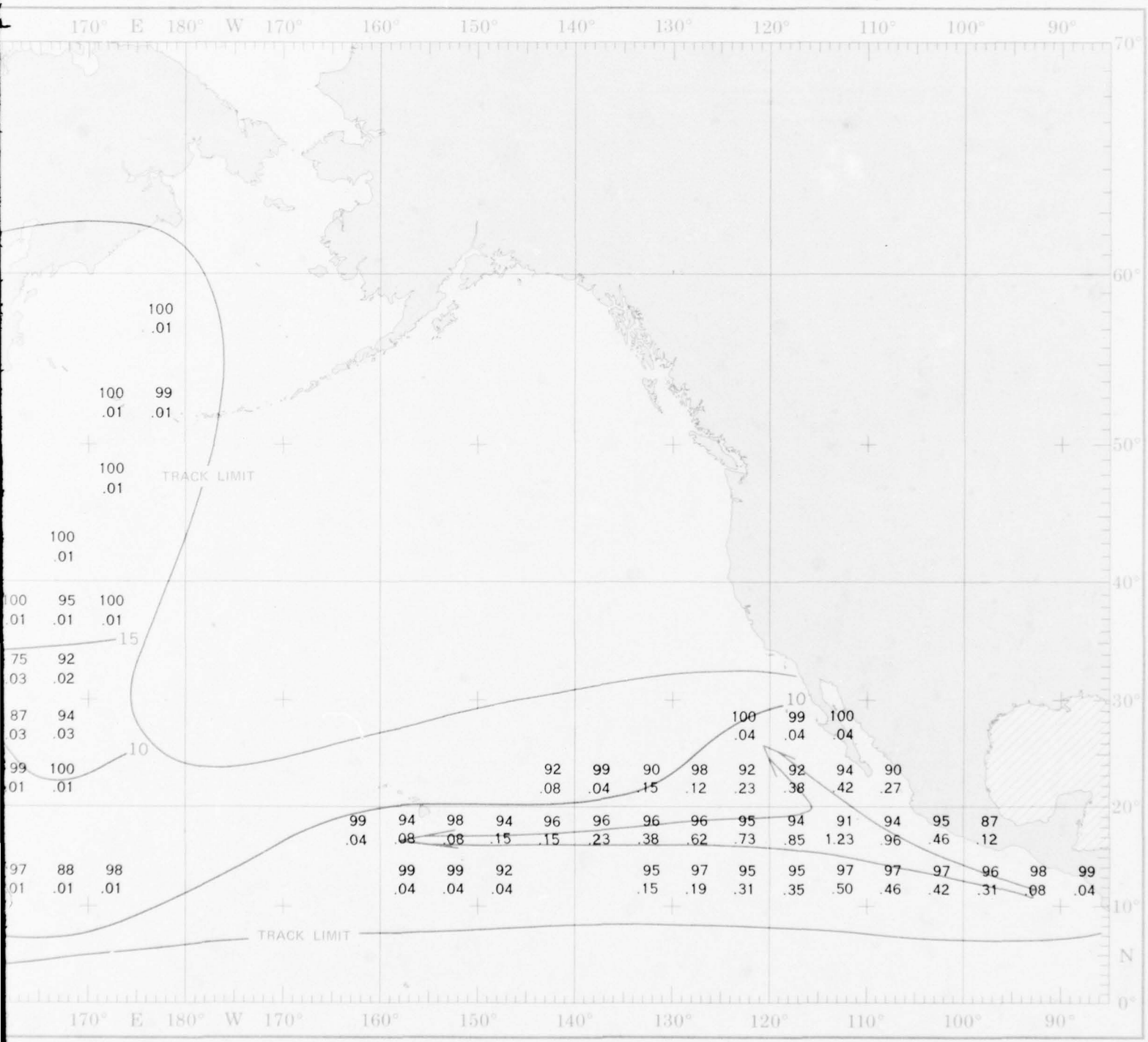
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

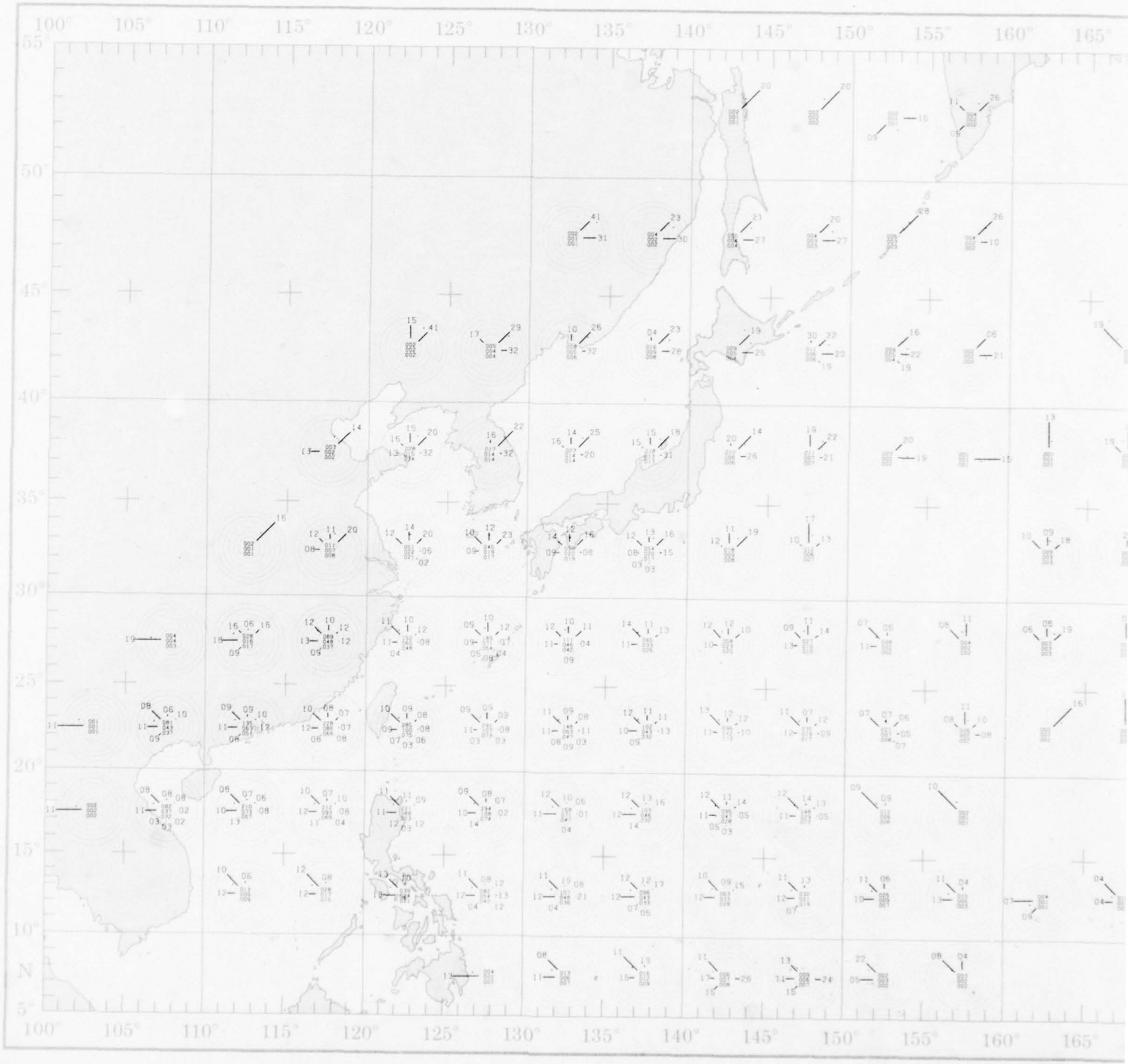


TROPICAL CYCLONE CHARACTERISTICS

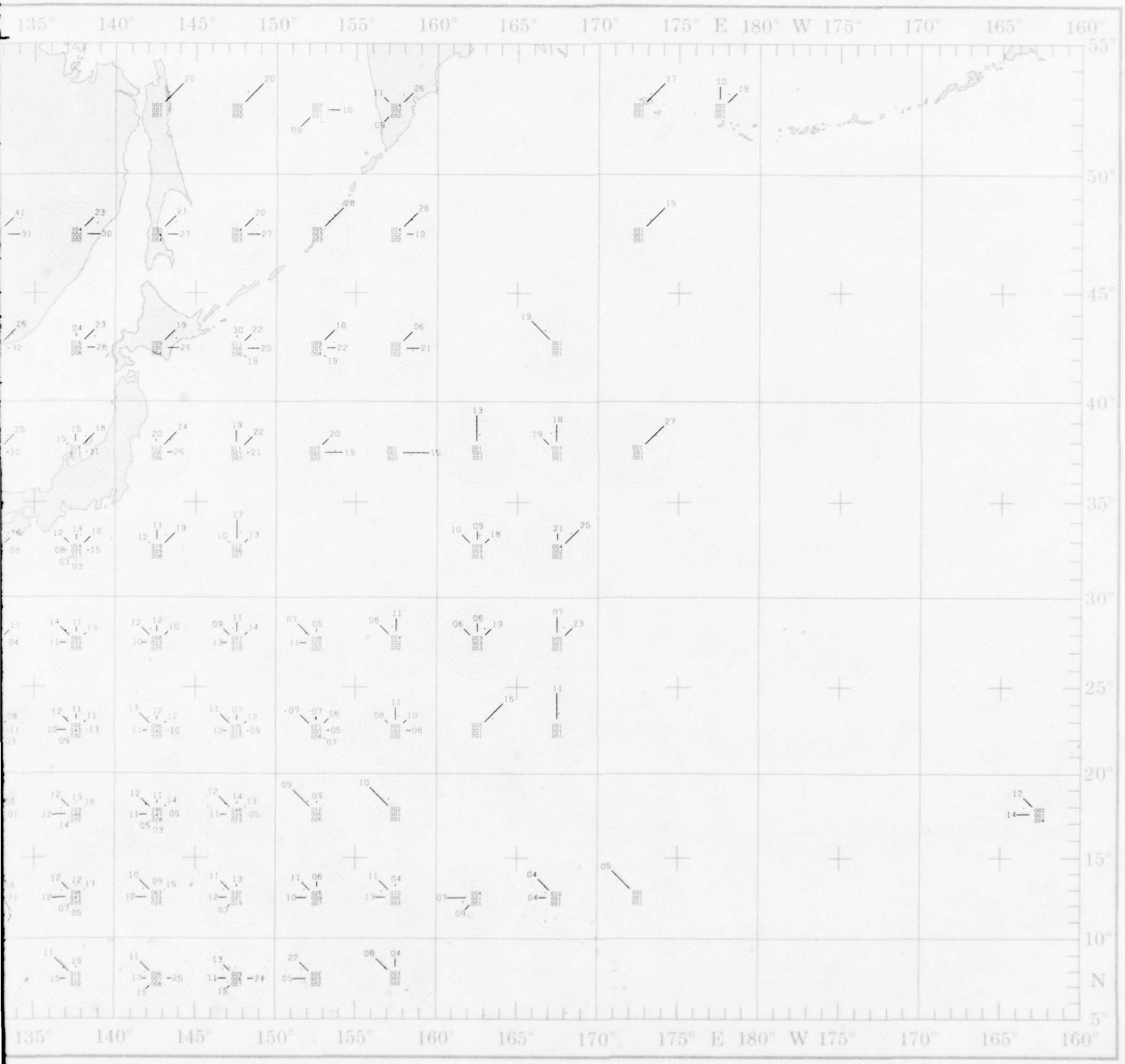



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
TRACK LIMIT
TRACK LIMIT
15
10
10
100 .01
100 .01
99 .01
100 .01
100 .01
95 .01
100 .01
75 .03
92 .02
87 .03
94 .03
99 .01
100 .01
100 .04
99 .04
100 .04
92 .08
99 .04
90 .15
98 .12
92 .23
92 .38
94 .42
90 .27
99 .04
94 .08
98 .08
94 .15
96 .15
96 .23
96 .38
96 .62
95 .73
94 .85
91 1.23
94 .96
95 .46
87 .12
97 .01
88 .01
98 .01
99 .04
99 .04
92 .04
95 .15
97 .19
95 .31
95 .35
97 .50
97 .46
97 .42
96 .31
98 .08
99 .04

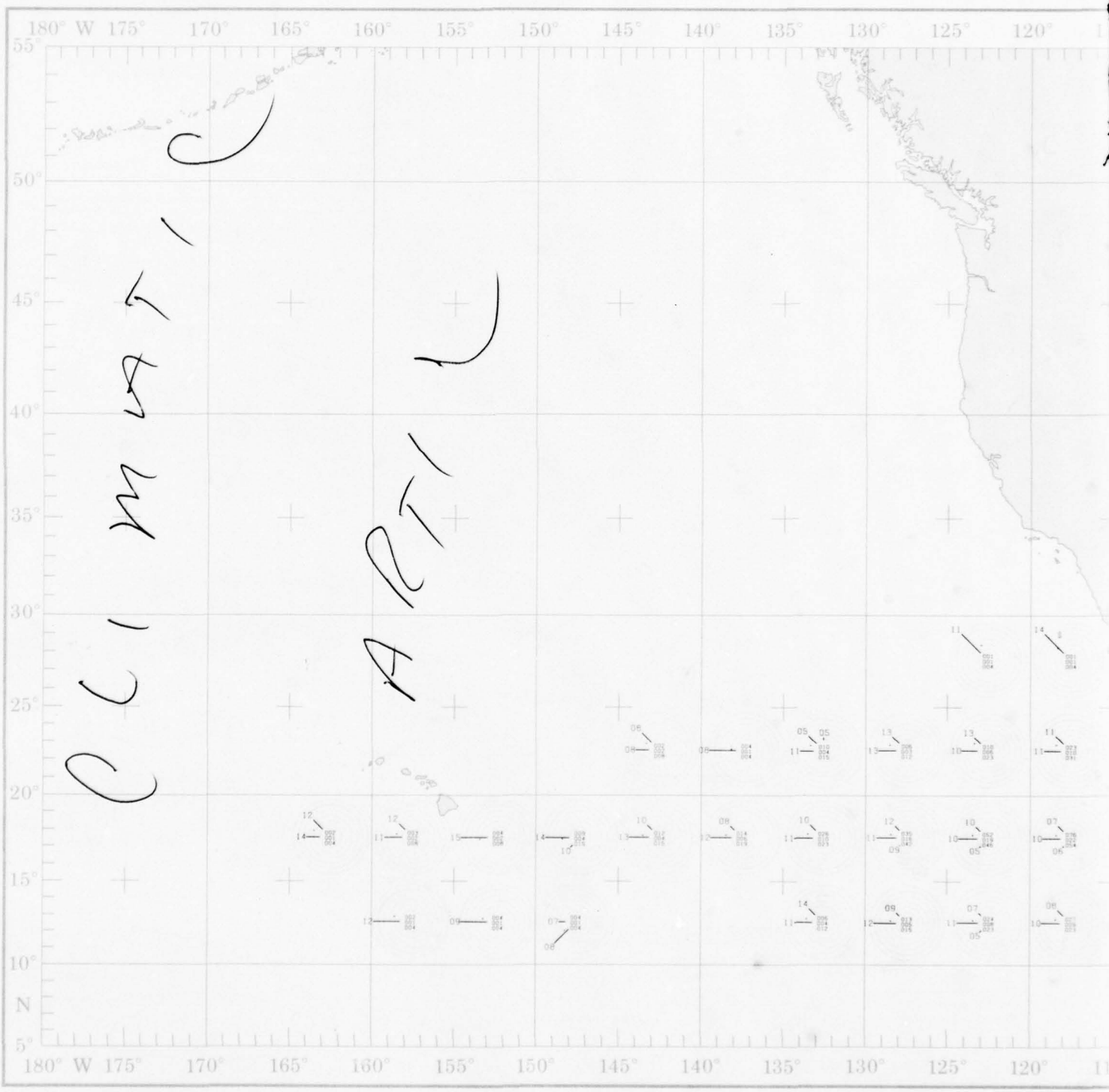
JULY


100°
105°
110°
115°
120°
125°
130°
135°
140°
145°
150°
155°
160°
165°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
N
5°

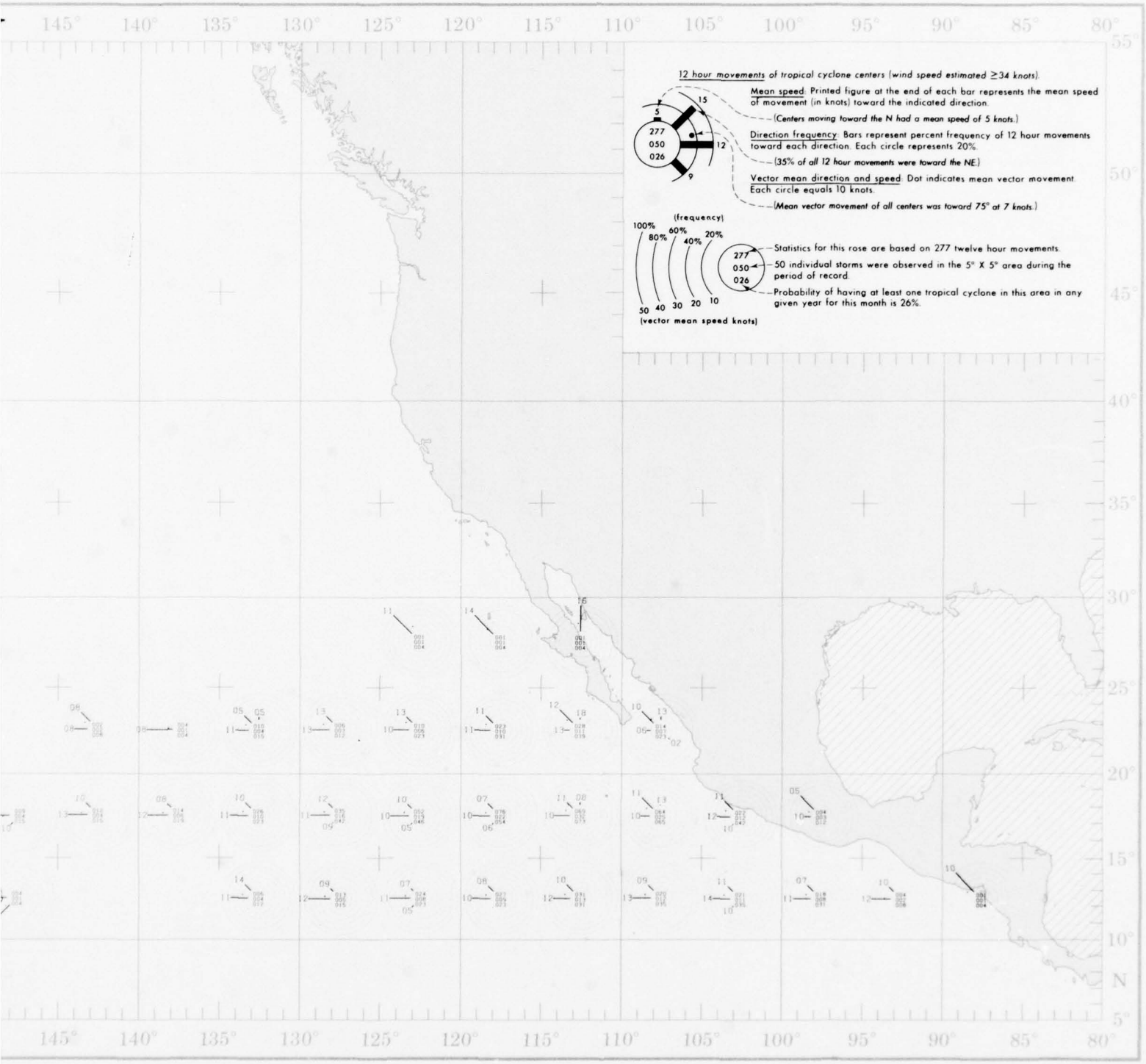
TROPICAL CYCLONE



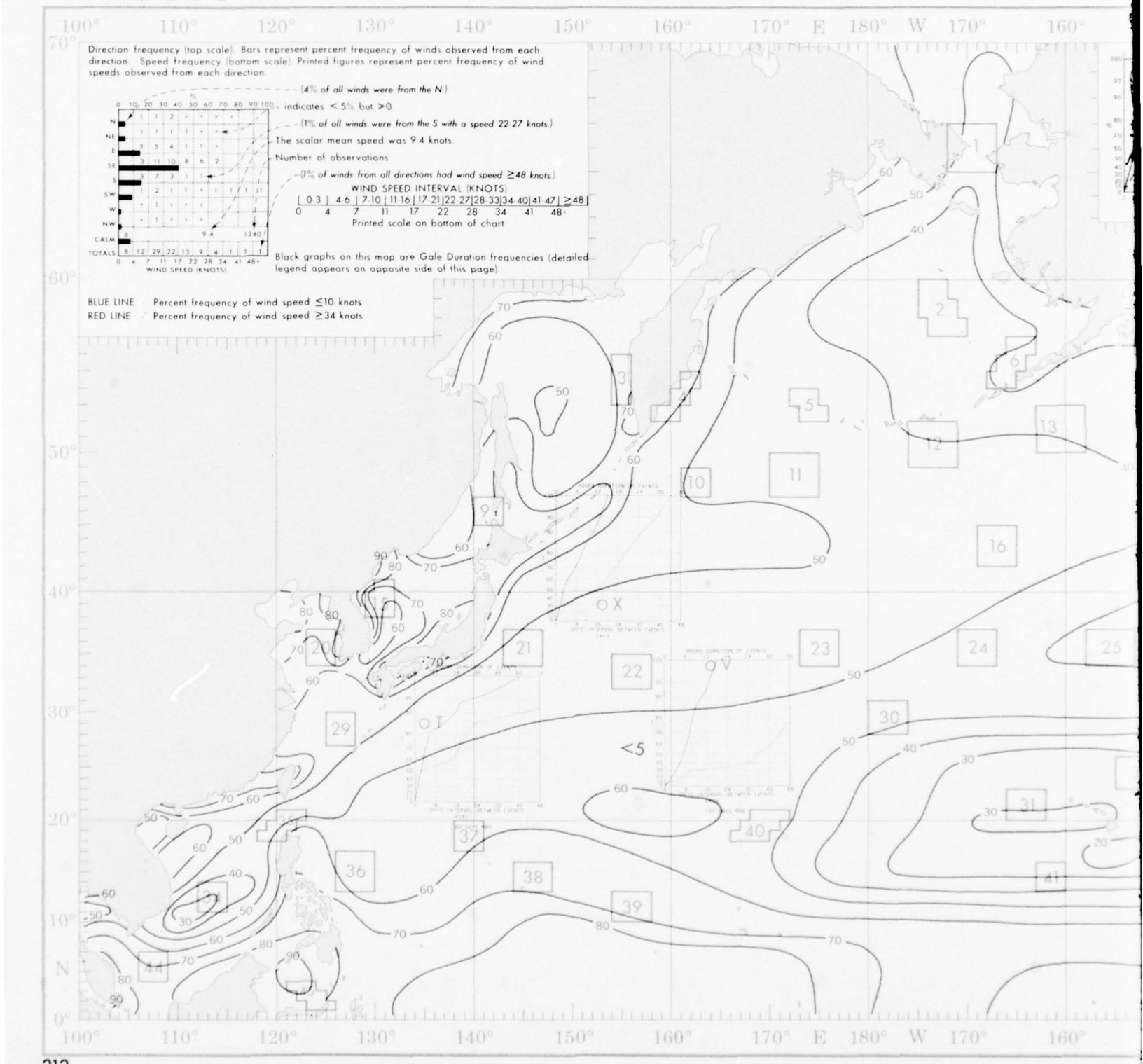
TROPICAL CYCLONE



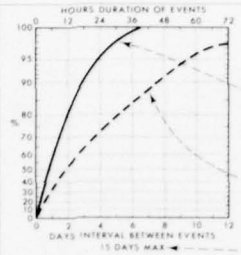
JULY


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

AUGUST


Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
indicates < 5% but >0
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
N
NE
E
SE
S
SW
W
NW
CALM
TOTALS
WIND SPEED (KNOTS)
9.4
1240
<5

SURFACE WINDS



Hours duration of gales - Days interval between gales

Cumulative percent frequency of hours duration of gales equal to or less than the number of hours intersected by the solid curve refers to the top scale.

(98% of gales had a duration ≤30 hours.)

Cumulative percent frequency of days interval between gales equal to or less than the number of days intersected by the broken curve refers to the bottom scale.

(88% of gales were followed by another gale in 7 days or less.)

Top and bottom scales are variable.
The maximum value(s) of hours duration and/or days interval will be displayed below the graph when the graph limits are exceeded.

(100% of gales were followed by another gale in 15 days or less.)

Durations and intervals for a particular month extend from the time they begin (or the first of the month if already in progress) and are terminated at the actual ending time, regardless of what month that may be.

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°

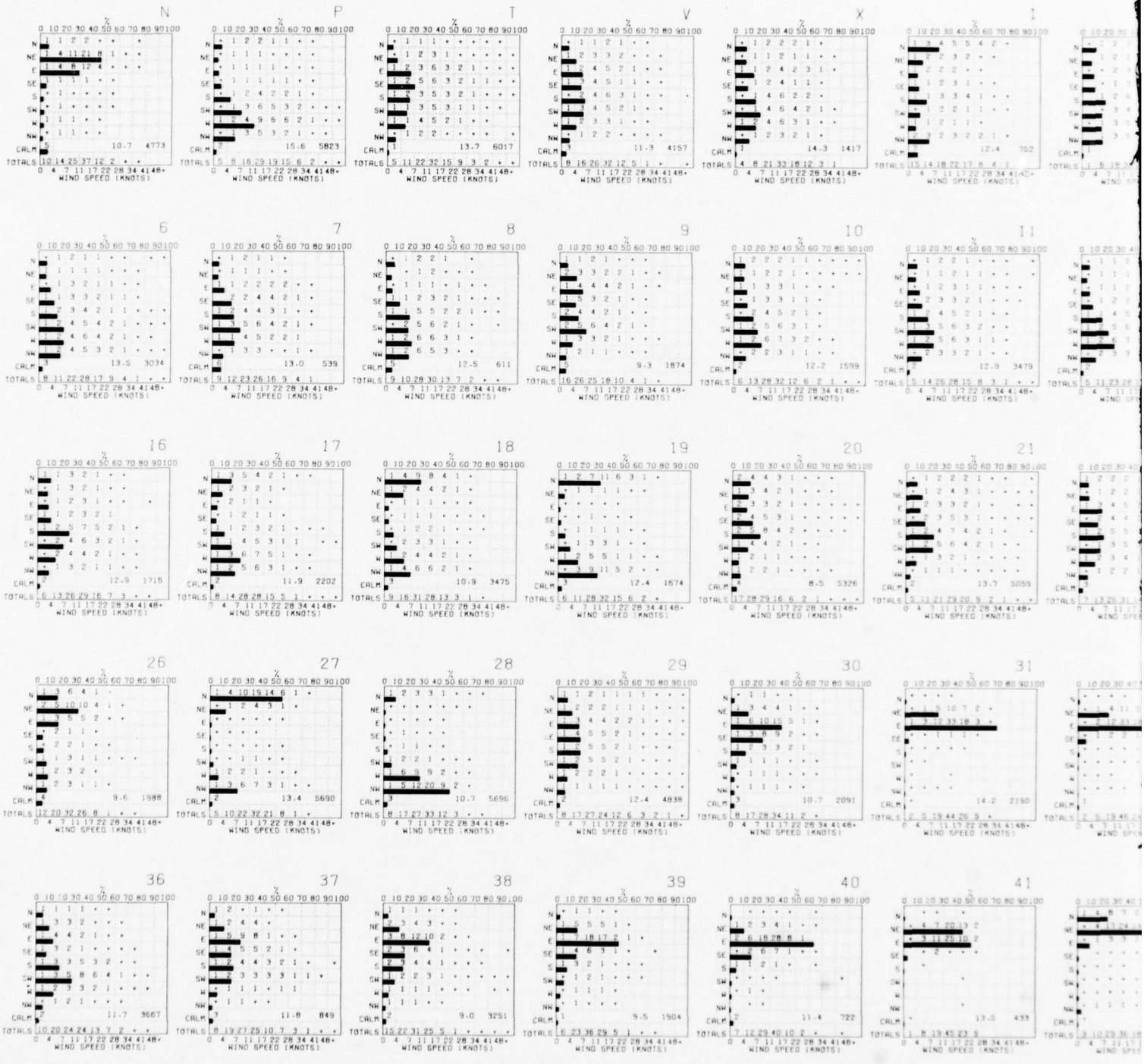
70° 60° 50° 40° 30° 20° 10° N 0°

1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 30 31 32 33 35 39 40 41 42 43

OP OX OV ON

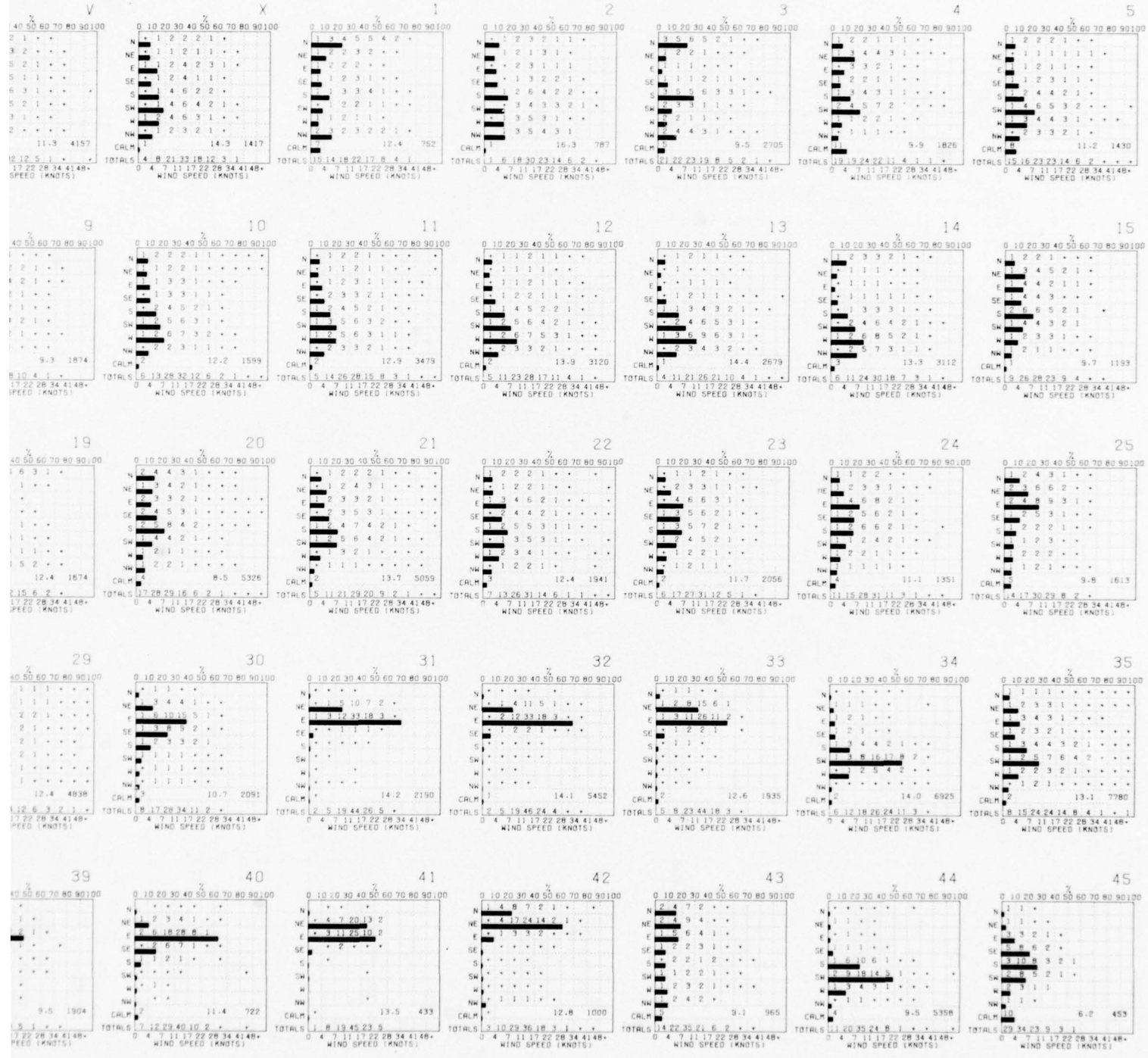
<5 <5

WIND DIRECTION AND SPEED



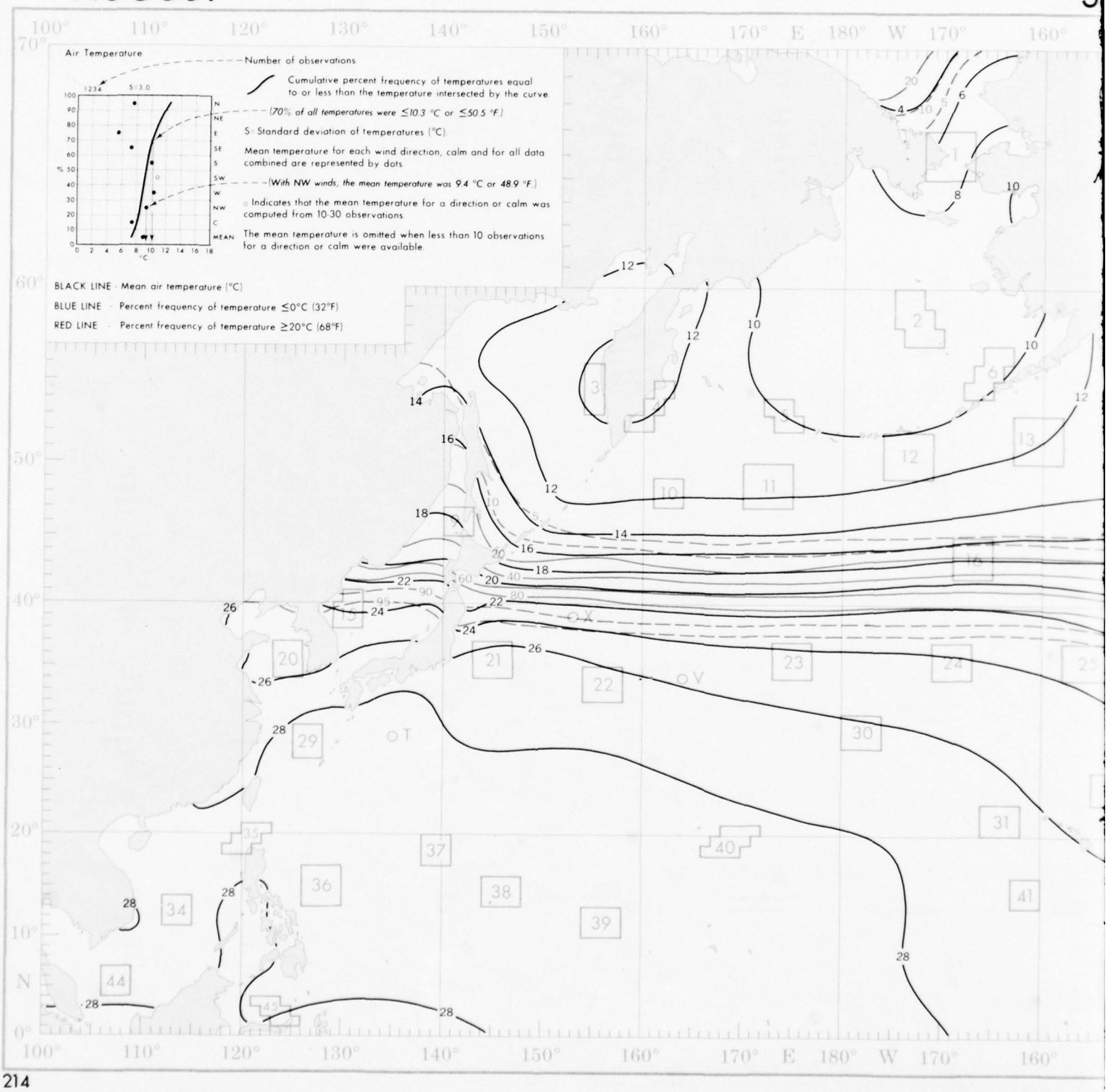
Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

AUGUST

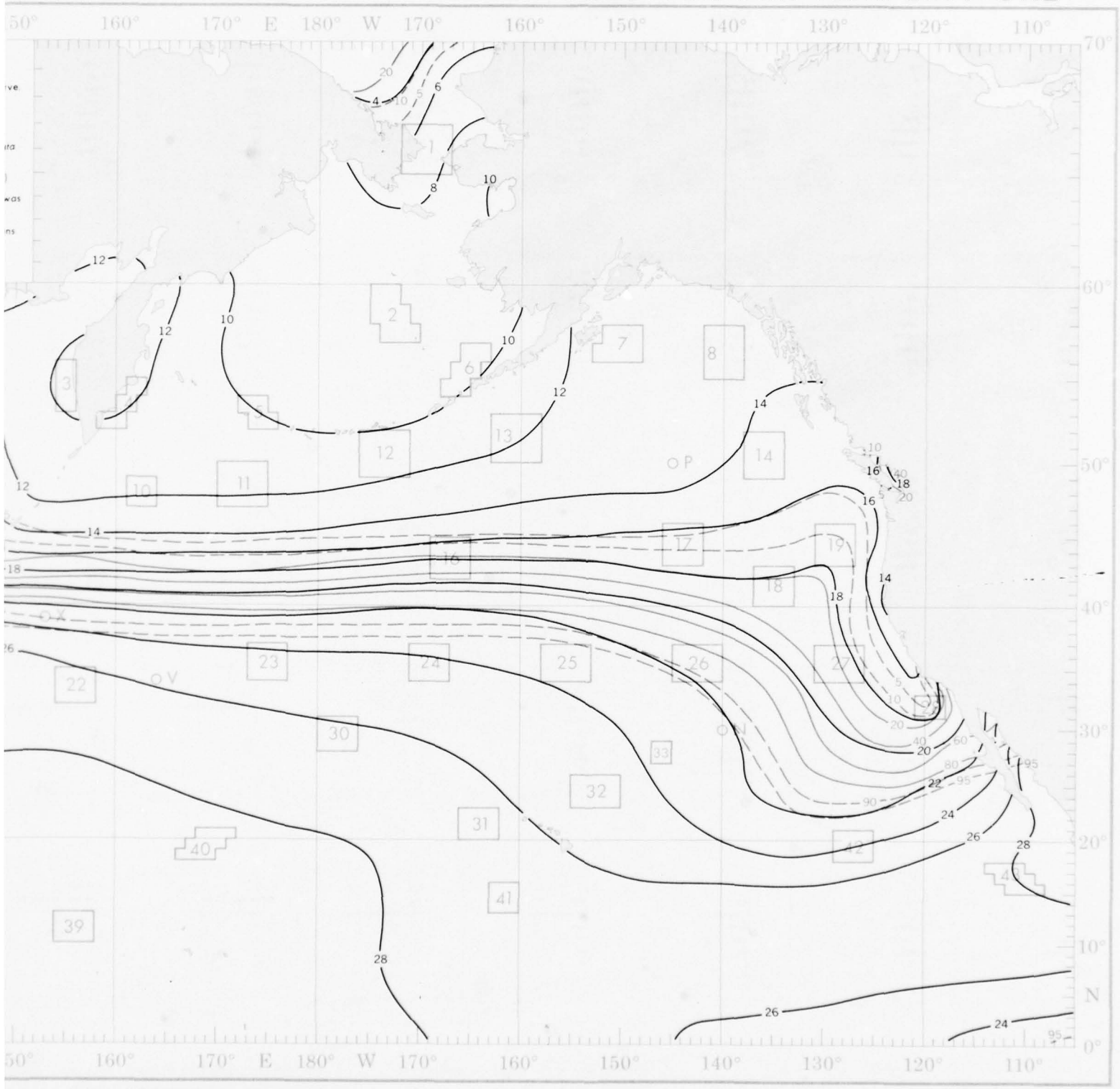


e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

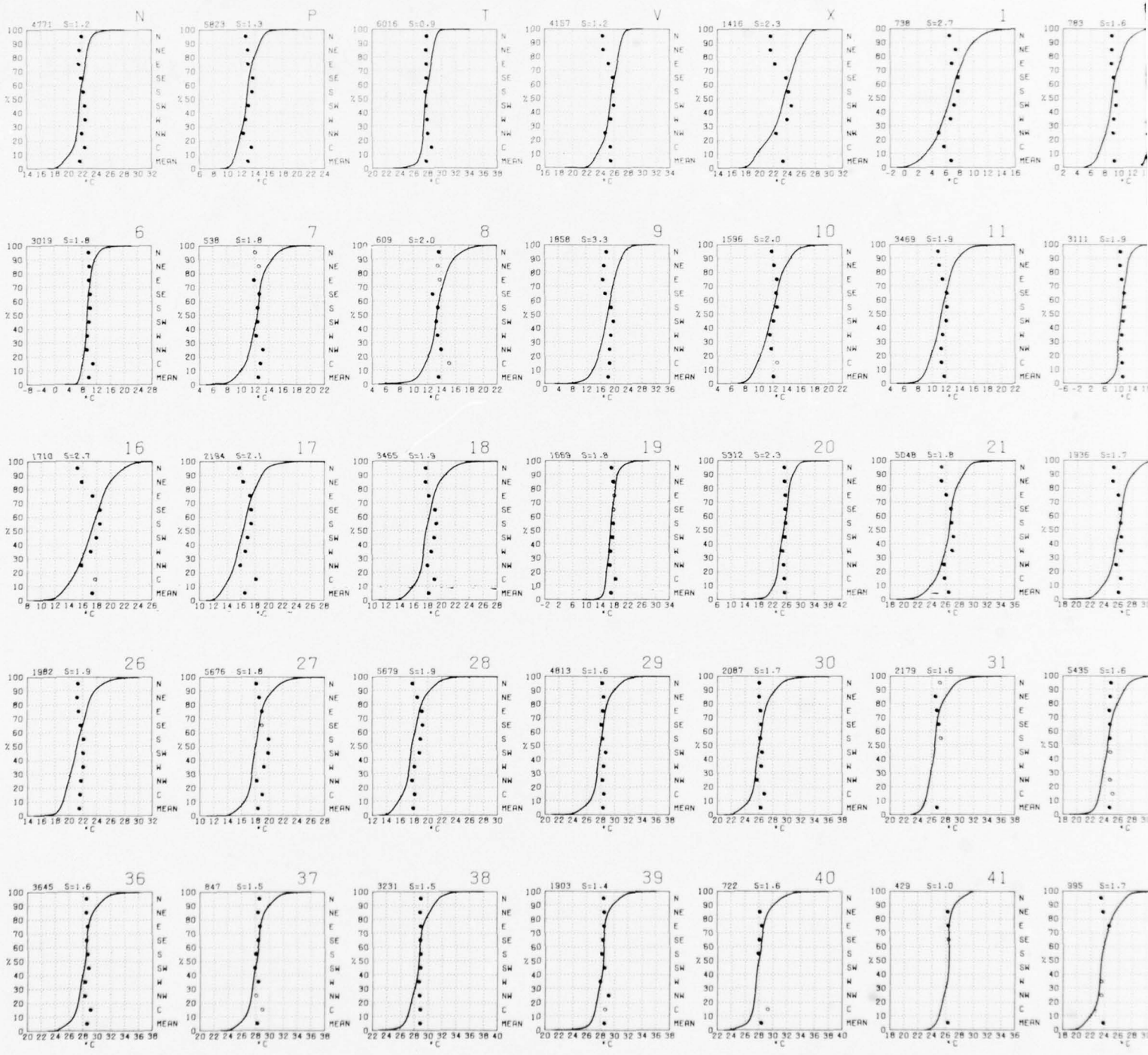
AUGUST


Air Temperature
Number of observations
1234
S=3.0
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
N
NE
E
SE
S
SW
W
NW
C
MEAN
% 100 90 80 70 60 50 40 30 20 10 0
0 2 4 6 8 10 12 14 16 18
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
12 14 16 18 22 24 26 28 10 20 40 60 80 90 95
1 2 3 4 5 6 7 8 10 11 12 13 15 16 20 21 22 23 24 25 29 30 31 34 35 36 37 38 39 40 41 44 45

SURFACE AIR TEMPERATURE



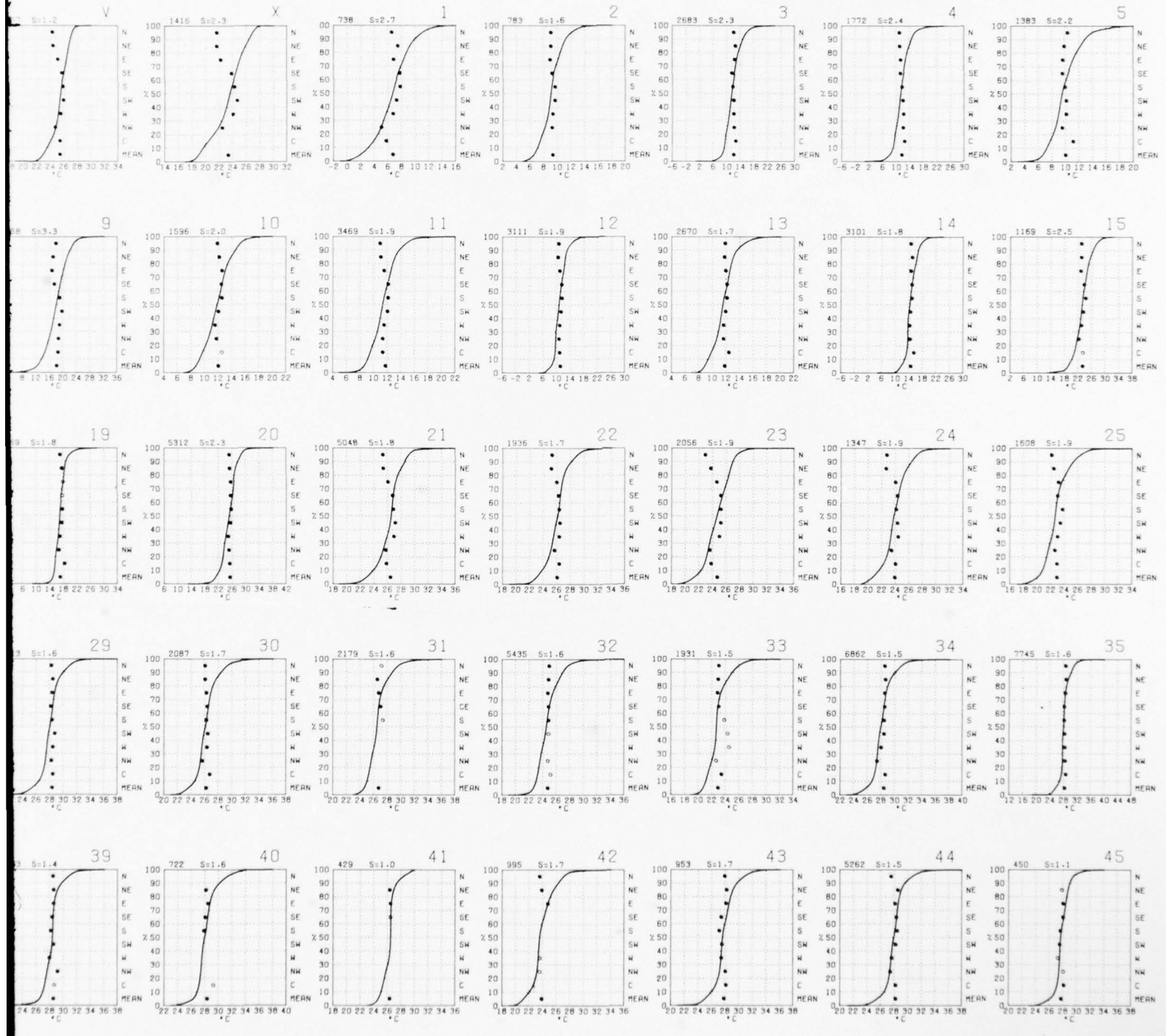
SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

RE

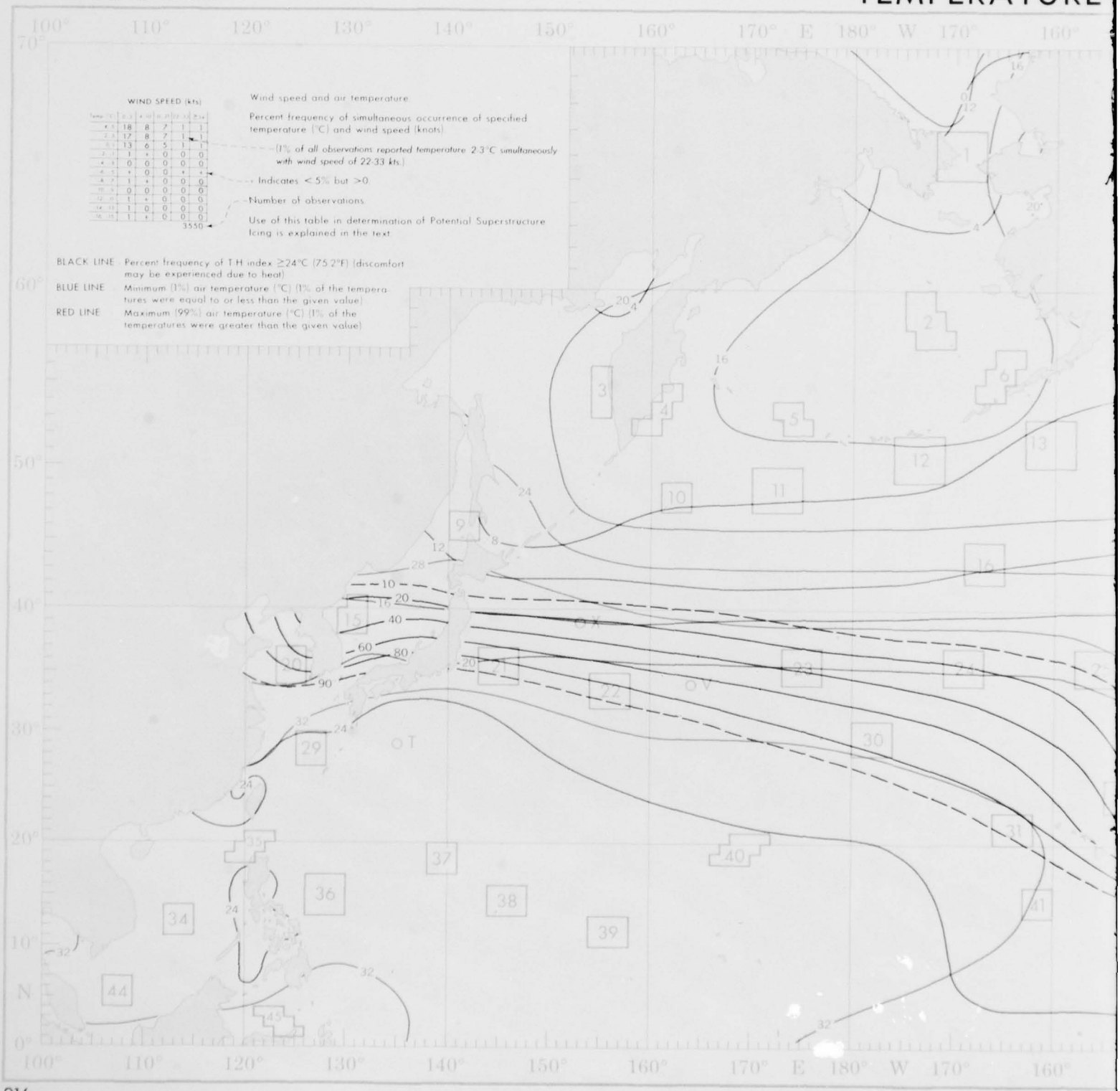
AUGUST



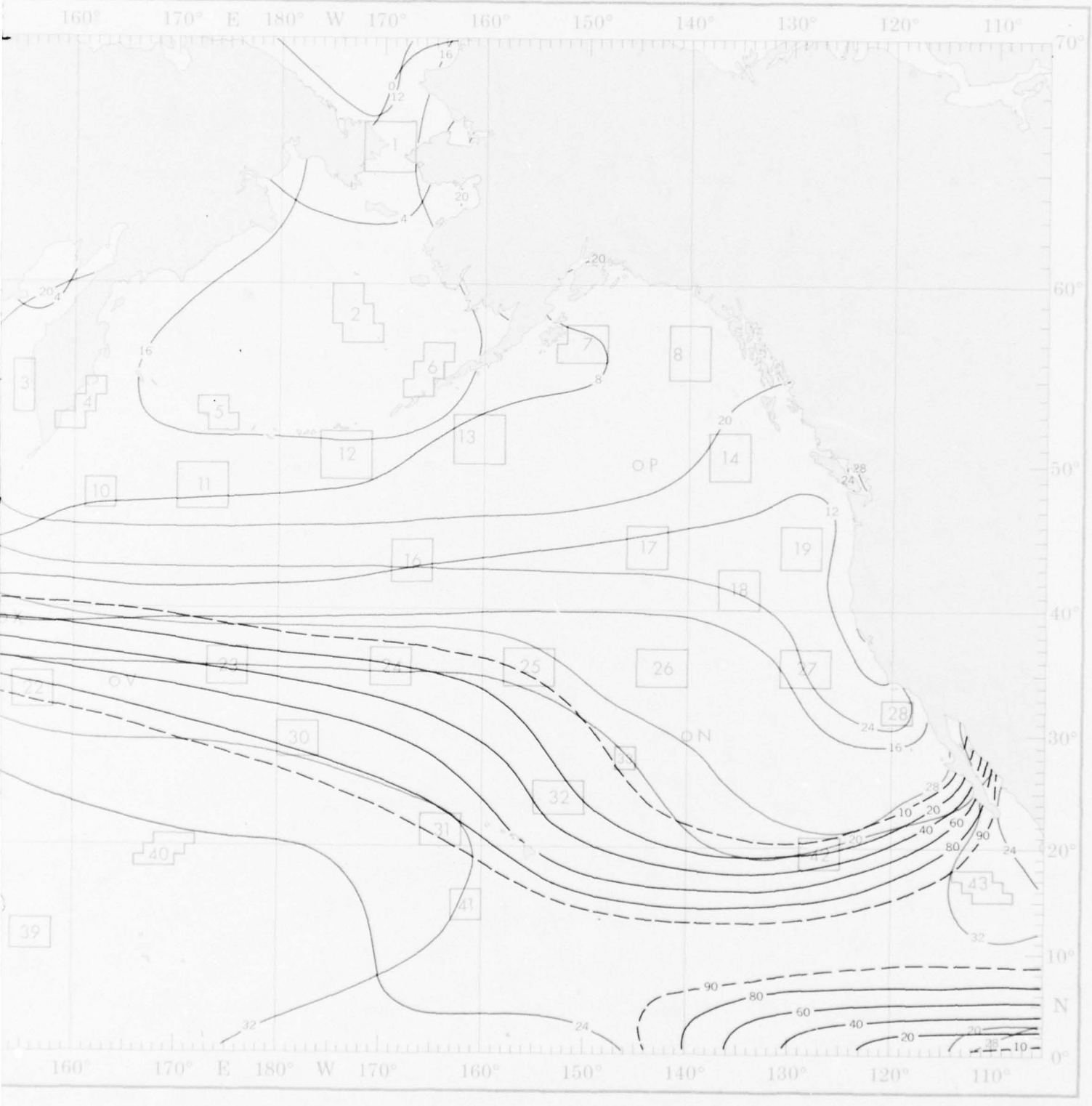
ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	1	3	2	+	0
22.23	5	21	21	1	+
20.21	3	13	25	1	+
18.19	+	1	2	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4771

P

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	+	0
16.17	+	1	1	1	+
14.15	2	8	12	6	1
12.13	2	11	28	12	1
10.11	+	3	6	3	+
8.9	+	+	+	+	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

5823

T

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	1	1	+	+	0
28.29	3	23	34	8	1
26.27	1	9	13	4	1
24.25	0	+	+	+	+
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

6016

V

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	1	1	+	0
26.27	4	23	25	4	+
24.25	3	15	14	2	+
22.23	1	3	3	+	+
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4157

X

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	0	0	0
26.27	1	7	12	3	+
24.25	1	9	14	4	0
22.23	1	8	15	4	+
20.21	1	3	6	3	+
18.19	+	2	4	2	+
16.17	+	+	0	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
9.9	0	0	0	0	0

1416

1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	0	0	0
14.15	+	+	+	+	0
12.13	+	1	2	1	0
10.11	1	4	4	1	0
8.9	3	8	9	3	0
6.7	3	10	15	5	+
4.5	2	5	7	3	+
2.3	3	3	1	+	0
0.1	1	1	1	+	+
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

738

TEMP (°C)	0-3	4-10	11-21	22-
16.17	0	0	+	
14.15	0	+	+	
12.13	+	2	4	
10.11	+	8	23	
8.9	+	10	22	
6.7	+	3	3	
4.5	0	0	+	
2.3	0	0	0	
0.1	0	0	0	
-2.-1	0	0	0	
-4.-3	0	0	0	

6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	0	0	0
18.19	+	+	+	0	0
16.17	+	+	+	0	0
14.15	1	1	+	+	+
12.13	2	5	4	1	+
10.11	3	13	18	5	+
8.9	2	13	20	6	1
6.7	+	1	2	1	0
4.5	0	0	+	0	0
2.3	0	+	0	0	0
0.1	0	0	0	0	0

3020

7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	+	0
16.17	1	3	1	+	+
14.15	3	6	8	3	0
12.13	3	16	20	6	+
10.11	2	8	11	3	+
8.9	1	1	2	+	0
6.7	+	+	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

538

8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	0	0	0
18.19	1	1	+	0	0
16.17	2	5	4	1	0
14.15	2	13	14	3	+
12.13	3	14	20	4	+
10.11	+	4	4	2	0
8.9	+	+	+	0	0
6.7	0	+	0	0	0
4.5	0	0	0	+	+
2.3	0	0	0	0	0

609

9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	+	+	+	0	0
26.27	+	1	+	0	0
24.25	1	2	1	+	0
22.23	2	6	3	+	0
20.21	3	11	5	+	+
18.19	4	14	9	1	+
16.17	3	10	6	1	+
14.15	1	5	3	1	0
12.13	1	2	2	1	0
≤11	+	1	1	+	0

1858

10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	+	+	0	0
16.17	+	2	2	+	0
14.15	2	8	7	1	+
12.13	2	16	18	3	0
10.11	2	10	12	3	1
8.9	+	4	4	+	0
6.7	0	1	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1596

11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	+	+	0	0
18.19	+	+	+	0	0
16.17	+	2	1	+	0
14.15	1	5	6	1	+
12.13	2	15	17	4	+
10.11	2	14	15	4	1
8.9	1	4	4	1	+
6.7	+	+	+	0	0
4.5	0	+	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

3470

TEMP (°C)	0-3	4-10	11-21	22-
24.25	0	0	+	
22.23	0	+	+	
20.21	0	+	+	
18.19	+	+	+	
16.17	+	1	1	
14.15	1	3	4	
12.13	2	10	13	
10.11	2	13	19	
8.9	1	6	8	
6.7	+	+	+	
4.5	0	0	0	

16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	+	0
24.25	+	+	+	+	0
22.23	1	2	2	1	0
20.21	1	5	7	1	+
18.19	2	11	14	2	+
16.17	2	11	12	3	+
14.15	1	7	6	2	0
12.13	+	3	3	1	+
10.11	0	+	+	0	0
8.9	0	+	0	0	0
6.7	0	0	0	0	0

1710

17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	0	0
24.25	+	+	+	0	0
22.23	+	1	1	+	0
20.21	1	3	3	+	0
18.19	2	10	9	1	+
16.17	3	17	19	2	+
14.15	1	9	10	2	+
12.13	+	3	2	1	0
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2194

18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	+	0	0
24.25	+	+	+	0	0
22.23	1	2	1	+	0
20.21	1	8	5	1	0
18.19	4	19	18	2	+
16.17	2	15	15	1	0
14.15	+	2	1	+	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

3465

19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	+	+	0	0
22.23	+	1	+	0	0
20.21	1	3	2	+	0
18.19	2	12	16	2	0
16.17	2	18	23	4	+
14.15	+	4	6	1	0
12.13	0	0	+	0	0
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1669

20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	0	0	0
32.33	+	+	+	0	0
30.31	+	1	1	0	0
28.29	2	10	4	+	+
26.27	6	20	8	1	+
24.25	4	16	6	1	+
22.23	3	8	3	+	+
20.21	1	1	+	+	+
18.19	+	+	+	+	+
≤17	+	+	+	0	0

5312

21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	+	+	0	+
30.31	+	1	1	+	0
28.29	1	8	13	4	+
26.27	2	15	25	6	+
24.25	1	6	7	1	+
22.23	+	2	3	1	+
20.21	+	+	+	+	+
18.19	+	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5051

TEMP (°C)	0-3	4-10	11-21	22-
34.35	0	0	+	
32.33	+	+	+	
30.31	+	1	1	
28.29	2	5	7	
26.27	4	21	24	
24.25	2	9	9	
22.23	+	2	3	
20.21	+	+	+	
18.19	0	+	0	
16.17	0	0	0	
14.15	0	0	0	

26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	+	+	0	0
26.27	1	2	1	+	0
24.25	1	4	3	+	0
22.23	5	19	10	+	0
20.21	4	20	14	1	+
18.19	1	6	6	+	0
16.17	+	+	+	0	0
14.15	+	0	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1988

27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	+	+	0	0
22.23	1	2	2	+	0
20.21	1	7	7	1	+
18.19	2	16	26	4	+
16.17	1	7	15	4	+
14.15	+	+	2	+	0
12.13	0	+	+	0	+
10.11	0	0	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

5677

28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	+	+	0	0
26.27	0	+	+	0	0
24.25	+	+	+	0	0
22.23	+	2	1	+	0
20.21	1	7	4	+	0
18.19	3	15	19	2	0
16.17	3	15	19	2	0
14.15	+	2	3	+	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

5679

29

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	+	+	+	0	0
32.33	+	2	1	+	0
30.31	2	7	5	1	+
28.29	4	24	21	6	1
26.27	2	9	7	2	1
24.25	+	1	1	+	+
22.23	+	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

4820

30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	0	0	0
32.33	+	+	+	0	0
30.31	+	2	1	0	0
28.29	2	7	6	+	0
26.27	4	23	24	1	0
24.25	2	11	12	1	0
22.23	+	1	1	+	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2087

31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	+	1	0	0
30.31	+	1	4	+	0
28.29	1	4	13	+	0
26.27	1	13	43	4	0
24.25	0	4	8	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2179

TEMP (°C)	0-3	4-10	11-21	22-
34.35	0	0	+	
32.33	0	+	+	
30.31	+	+	1	
28.29	+	1	3	
26.27	1	6	18	
24.25	1	11	35	
22.23	+	5	13	
20.21	+	+	+	
18.19	0	0	0	
16.17	0	0	0	
14.15	0	0	0	

36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	0	+	+	0
34.35	+	+	+	0	0
32.33	+	2	1	+	0
30.31	2	7	7	2	+
28.29	6	25	20	6	+
26.27	1	9	7	1	+
24.25	+	+	1	+	0
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3646

37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	+	1	0	0
30.31	2	7	5	1	0
28.29	5	26	21	5	+
26.27	1	10	8	4	1
24.25	0	1	1	0	+
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

847

38

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	+	+	0	0
32.33	2	3	1	0	+
30.31	5	11	6	+	0
28.29	7	31	19	1	+
26.27	1	7	4	1	+
24.25	+	+	+	0	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3235

39

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	+	1	+	0	0
30.31	1	10	4	0	0
28.29	3	38	24	1	0
26.27	1	9	5	+	+
24.25	+	+	1	+	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1903

40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	0	+	0	0	0
32.33	+	1	2	0	0
30.31	2	6	6	+	0
28.29	3	22	30	1	+
26.27	2	11	11	+	0
24.25	0	+	1	+	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

722

41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	3	8	0	0
26.27	1	23	54	4	0
24.25	0	1	5	1	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

429

TEMP (°C)	0-3	4-10	11-21	22-
32.33	0	+	0	
30.31	0	+	+	
28.29	+	1	1	
26.27	1	6	8	
24.25	1	13	21	
22.23	1	16	22	
20.21	+	3	1	
18.19	0	+	+	
16.17	0	0	0	
14.15	0	0	0	
12.13	0	0	0	

Graphs represent the objective compilation of available data for specified areas without regard to susp
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

PERATURE

AUGUST

V

D SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	*	0	0	0	
*	1	1	*	0	
4	23	25	4	*	
3	15	14	2	*	
1	3	3	*	*	
0	*	*	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
				4157	

X

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
28.29	*	*	0	0	0	
26.27	1	7	12	3	*	
24.25	1	9	14	4	0	
22.23	1	8	15	4	*	
20.21	1	3	6	3	*	
18.19	*	2	4	2	*	
16.17	*	*	0	*	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
10.11	0	0	0	0	0	
8.9	0	0	0	0	0	
					1416	

1

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
16.17	0	*	0	0	0	
14.15	*	*	*	*	0	
12.13	*	1	2	1	0	
10.11	1	4	4	1	0	
8.9	3	8	9	3	0	
6.7	3	10	15	5	*	
4.5	2	5	7	3	*	
2.3	3	3	1	*	0	
0.1	1	1	1	*	*	
-2.-1	0	0	0	0	0	
-4.-3	0	0	0	0	0	
					738	

2

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
16.17	0	0	*	0	0	
14.15	0	*	*	0	0	
12.13	*	2	4	2	0	
10.11	*	8	23	7	*	
8.9	*	10	22	9	1	
6.7	*	3	3	3	1	
4.5	0	0	*	*	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	
-2.-1	0	0	0	0	0	
-4.-3	0	0	0	0	0	
					783	

3

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	*	0	0	0	
22.23	0	*	*	0	0	
20.21	*	*	*	0	0	
18.19	*	1	*	*	0	
16.17	1	4	1	*	*	
14.15	4	8	3	*	*	
12.13	7	15	11	2	*	
10.11	6	13	9	3	*	
8.9	2	3	2	1	*	
6.7	*	*	*	0	0	
≤5	*	*	*	0	0	
					2684	

4

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	*	*	0	0	
22.23	0	*	0	0	0	
20.21	*	*	0	*	0	
18.19	*	*	*	*	0	
16.17	1	2	2	0	*	
14.15	3	6	4	*	*	
12.13	8	15	10	2	*	
10.11	5	14	10	2	*	
8.9	2	5	4	2	*	
6.7	*	1	1	*	0	
≤5	0	*	*	*	0	
					1772	

5

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
18.19	*	*	*	*	0	
16.17	1	1	*	*	0	
14.15	2	1	*	0	0	
12.13	4	8	4	1	*	
10.11	4	11	12	3	*	
8.9	3	15	18	3	*	
6.7	1	3	2	1	0	
4.5	0	*	0	0	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	
-2.-1	0	0	0	0	0	
					1383	

9

D SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	*	0	0	0	
*	*	*	0	0	
*	1	*	0	0	
1	2	1	*	0	
2	6	3	*	0	
3	11	5	*	*	
4	14	9	1	*	
3	10	6	1	*	
1	5	3	1	0	
1	2	2	1	0	
*	1	1	*	0	
				1858	

10

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
20.21	0	0	*	0	0	
18.19	0	*	*	0	0	
16.17	*	2	2	*	0	
14.15	2	8	7	1	*	
12.13	2	16	18	3	0	
10.11	2	10	12	3	1	
8.9	*	4	4	*	0	
6.7	0	1	0	0	0	
4.5	0	0	0	0	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	
					1596	

11

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
20.21	*	*	*	0	0	
18.19	*	*	*	0	0	
16.17	*	2	1	*	0	
14.15	1	5	6	1	*	
12.13	2	15	17	4	*	
10.11	2	14	15	4	1	
8.9	1	4	4	1	*	
6.7	*	*	*	0	0	
4.5	0	*	0	0	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	
					3470	

12

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	0	*	0	0	
22.23	0	*	*	0	0	
20.21	0	*	*	0	0	
18.19	*	*	*	*	0	
16.17	*	1	1	*	0	
14.15	1	3	4	1	*	
12.13	2	10	13	4	*	
10.11	2	13	19	6	*	
8.9	1	6	8	2	*	
6.7	*	*	*	*	0	
4.5	0	0	0	0	0	
					3111	

13

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	0	*	0	0	
22.23	0	*	*	0	0	
20.21	0	*	*	0	0	
18.19	*	*	*	*	0	
16.17	*	1	1	*	0	
14.15	1	5	6	2	*	
12.13	2	14	20	6	1	
10.11	1	11	17	6	1	
8.9	*	2	2	1	*	
6.7	0	*	*	*	0	
4.5	0	0	0	0	0	
2.3	0	0	0	0	0	
0.1	0	0	0	0	0	
					2670	

14

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
24.25	0	*	0	0	0	
22.23	*	*	*	0	0	
20.21	0	*	*	0	0	
18.19	1	2	2	*	*	
16.17	2	10	12	2	*	
14.15	2	13	20	4	*	
12.13	1	8	13	4	*	
10.11	*	1	1	*	*	
8.9	*	0	*	*	0	
6.7	0	*	*	0	0	
4.5	0	0	0	0	0	
					3103	

15

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
32.33	0	*	0	0	0	
30.31	*	*	0	0	0	
28.29	*	3	2	*	0	
26.27	1	9	4	1	0	
24.25	3	16	10	1	*	
22.23	3	17	10	1	0	
20.21	1	7	4	1	0	
18.19	*	2	1	*	0	
16.17	0	*	*	*	0	
14.15	*	*	*	*	0	
12.13	0	*	0	0	0	
					1169	

19

D SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	*	*	0	0	
*	*	*	0	0	
*	1	*	0	0	
1	3	2	*	0	
2	12	16	2	0	
2	18	23	4	*	
*	4	6	1	0	
0	*	*	0	0	
0	0	*	0	0	
0	0	0	0	0	
				1669	

20

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
36.37	0	0	*	0	0	
34.35	0	*	*	0	0	
32.33	*	*	*	0	0	
30.31	*	1	*	0	0	
28.29	2	10	4	*	*	
26.27	6	20	8	1	*	
24.25	4	16	6	1	*	
22.23	3	8	3	*	*	
20.21	1	1	*	*	*	
18.19	*	*	*	*	*	
≤17	*	*	*	0	0	
					5312	

21

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	0	*	0	0	
32.33	*	*	*	0	*	
30.31	*	1	1	*	0	
28.29	1	8	13	4	*	
26.27	2	15	25	6	*	
24.25	1	6	7	1	*	
22.23	*	2	3	1	*	
20.21	*	*	*	*	0	
18.19	*	*	*	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					5051	

22

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	*	0	0	0	
32.33	*	*	*	0	0	
30.31	*	1	1	*	0	
28.29	2	5	7	1	*	
26.27	4	21	24	4	1	
24.25	2	9	9	1	*	
22.23	*	2	3	*	*	
20.21	*	*	*	0	0	
18.19	0	*	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					1938	

23

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	*	*	0	0	0	
32.33	*	0	*	0	0	
30.31	*	*	*	0	0	
28.29	1	4	2	*	0	
26.27	2	15	14	2	*	
24.25	2	15	16	2	*	
22.23	2	9	9	2	*	
20.21	*	1	2	1	0	
18.19	*	*	*	*	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					2056	

24

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
32.33	0	*	0	0	0	
30.31	0	*	*	0	0	
28.29	1	1	1	*	0	
26.27	2	7	7	1	0	
24.25	4	17	16	1	*	
22.23	4	13	14	1	*	
20.21	*	3	3	*	*	
18.19	*	1	*	*	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
					1349	

25

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
32.33	*	0	0	0	0	
30.31	*	*	*	0	0	
28.29	*	1	1	0	0	
26.27	2	3	2	*	0	
24.25	3	11	7	1	0	
22.23	6	22	18	1	0	
20.21	2	8	7	*	0	
18.19	*	1	1	0	0	
16.17	0	*	*	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
					1611	

29

D SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
0	0	*	0	0	
*	*	*	0	0	
*	2	1	*	0	
2	7	5	1	*	
4	24	21	6	1	
2	9	7	2	1	
*	1	1	*	*	
*	*	*	*	0	
0	0	0	0	0	
0	0	0	0	0	
				4820	

30

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	*	*	0	0	0	
32.33	*	*	*	0	0	
30.31	*	2	1	0	0	
28.29	2	7	6	*	0	
26.27	4	23	24	1	0	
24.25	2	11	12	1	0	
22.23	*	1	1	*	0	
20.21	0	*	*	*	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					2087	

31

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	0	*	0	0	
32.33	*	*	1	0	0	
30.31	*	1	4	*	0	
28.29	1	4	13	*	0	
26.27	1	13	43	4	0	
24.25	0	4	8	1	0	
22.23	0	*	*	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					2179	

32

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	0	0	*	0	0	
32.33	0	*	*	0	0	
30.31	*	*	1	0	0	
28.29	*	1	3	*	0	
26.27	1	6	18	1	0	
24.25	1	11	35	3	*	
22.23	*	5	13	1	*	
20.21	*	*	*	*	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					5437	

33

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
30.31	0	0	*	0	0	
28.29	*	1	1	0	0	
26.27	1	2	3	0	0	
24.25	1	7	11	*	0	
22.23	2	18	39	2	0	
20.21	*	3	7	*	0	
18.19	0	*	*	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
10.11	0	0	0	0	0	
					1931	

34

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
36.37	*	*	*	0	0	
34.35	0	*	*	*	0	
32.33	*	1	2	*	0	
30.31	1	5	8	2	*	
28.29	3	17	29	8	*	
26.27	1	6	10	3	*	
24.25	*	*	1	*	*	
22.23	0	*	*	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
					6870	

35

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
38.39	*	*	0	0	0	
36.37	*	*	*	*	0	
34.35	*	*	*	*	0	
32.33	*	2	1	*	0	
30.31	2	8	7	2	*	
28.29	5	22	22	7	1	
26.27	1	6	7	3	1	
24.25	*	*	1	*	*	
22.23	0	*	*	*	*	
20.21	0	*	*	0	0	
18.19	0	0	0	0	0	
					7758	

39

D SPEED (KTS)					
0-3	4-10	11-21	22-33	≥ 34	
\	*	*	0	0	
7	1	*	0	0	
1	10	4	0	0	
3	38	24	1	0	
1	9	5	*	*	
*	*	1	*	0	
*	*	*	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
				1903	

40

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
36.37	0	*	*	0	0	
34.35	0	*	*	0	0	
32.33	*	1	2	0	0	
30.31	2	6	6	*	0	
28.29	3	22	30	1	*	
26.27	2	11	11	*	0	
24.25	0	*	1	*	0	
22.23	0	0	*	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
					722	

41

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
30.31	0	*	*	0	0	
28.29	0	3	8	0	0	
26.27	1	23	54	4	0	
24.25	0	1	5	1	0	
22.23	0	*	*	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
10.11	0	0	0	0	0	
					429	

42

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
32.33	0	*	0	0	0	
30.31	0	*	*	0	0	
28.29	*	1	1	*	0	
26.27	1	6	8	1	*	
24.25	1	13	21	2	*	
22.23	1	16	22	1	*	
20.21	*	3	1	*	0	
18.19	0	*	*	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
					995	

43

WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
34.35	*	0	*	0	0	
32.33	*	2	*	0	0	
30.31	2	6	2	0	0	
28.29	7	27	13	1	0	
26.27	5	19	9	1	*	
24.25	*	2	2	1	*	
22.23	0	0	*	0	0	
20.21	0	0	*	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
					957	

44

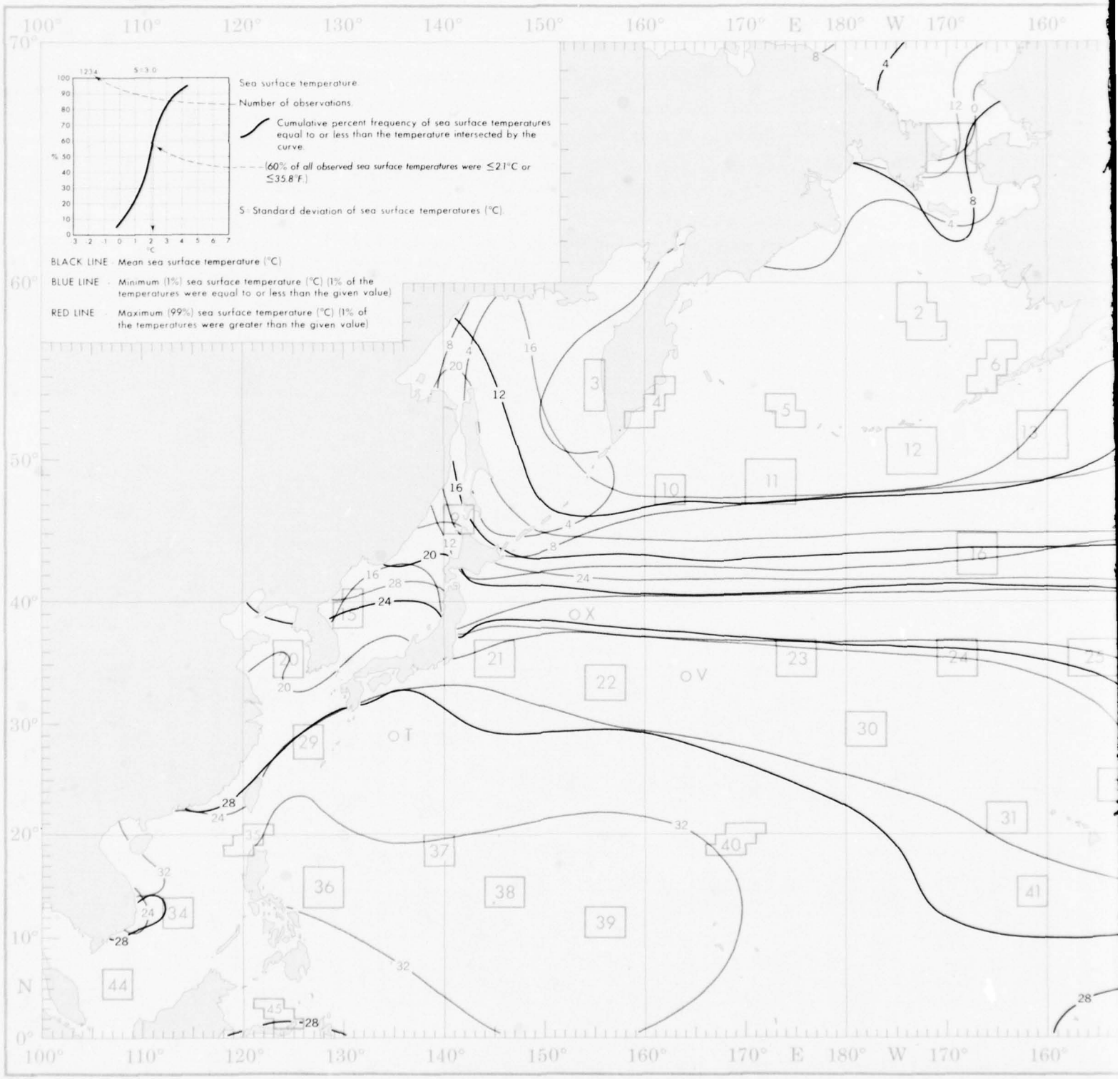
WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
36.37	*	*	*	0	0	
34.35	0	*	*	*	0	
32.33	*	1	1	*	0	
30.31	1	7	4	*	0	
28.29	7	36	19	1	0	
26.27	2	10	7	*	*	
24.25	*	1	1	*	*	
22.23	0	*	*	0	*	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
					5275	

45

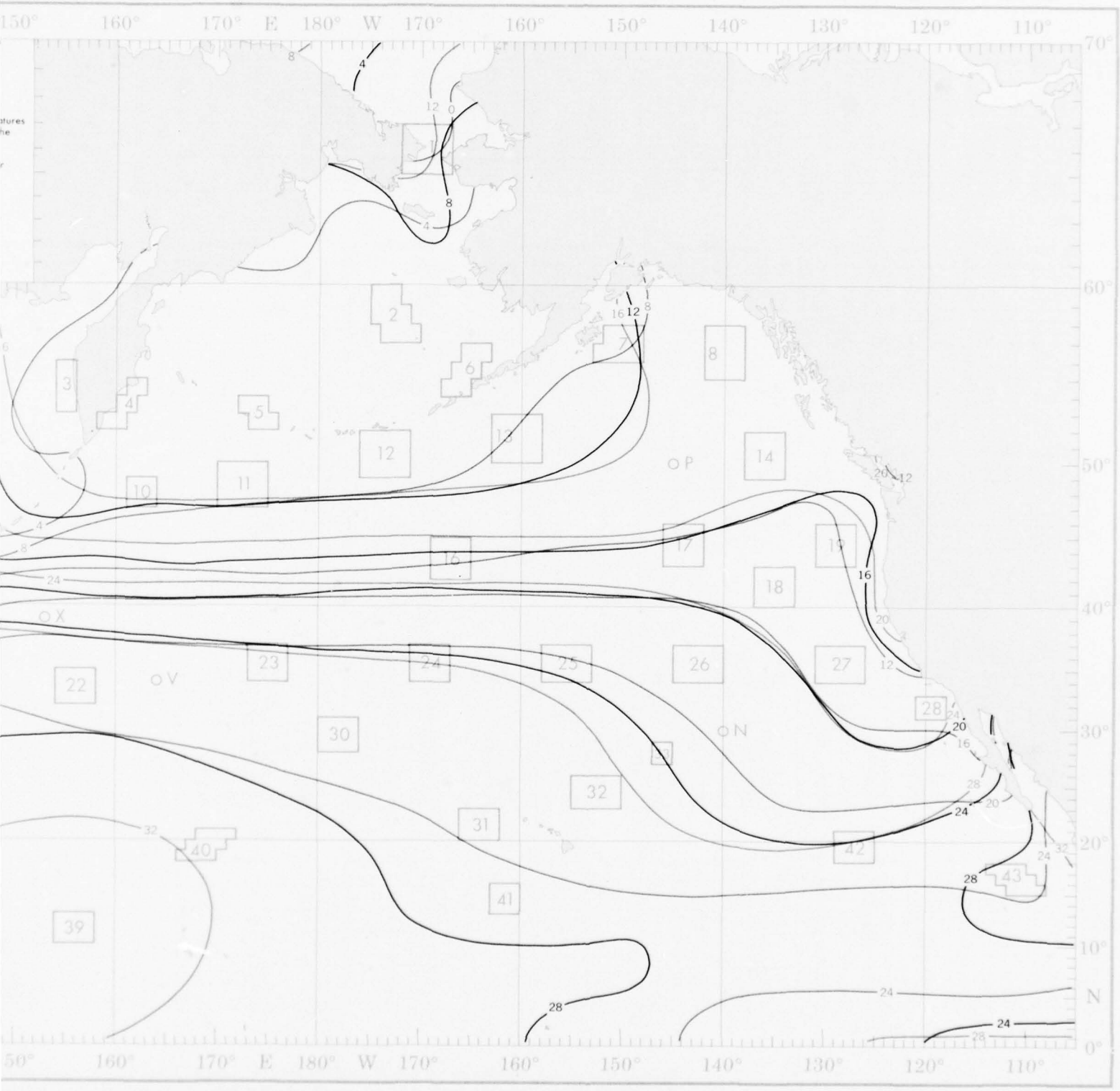
WIND SPEED (KTS)						
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34	
32.33	*	*	0	0	0	
30.31	3	3	*	0	0	
28.29	21	33	5	*	0	
26.27	6	20	7	1	0	
24.25	*	*	0	0	0	
22.23	0	0	*	0	0	
20.21	0	0	0	0	0	
18.19	0	0	0	0	0	
16.17	0	0	0	0	0	
14.15	0	0	0	0	0	
12.13	0	0	0	0	0	
					450	

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

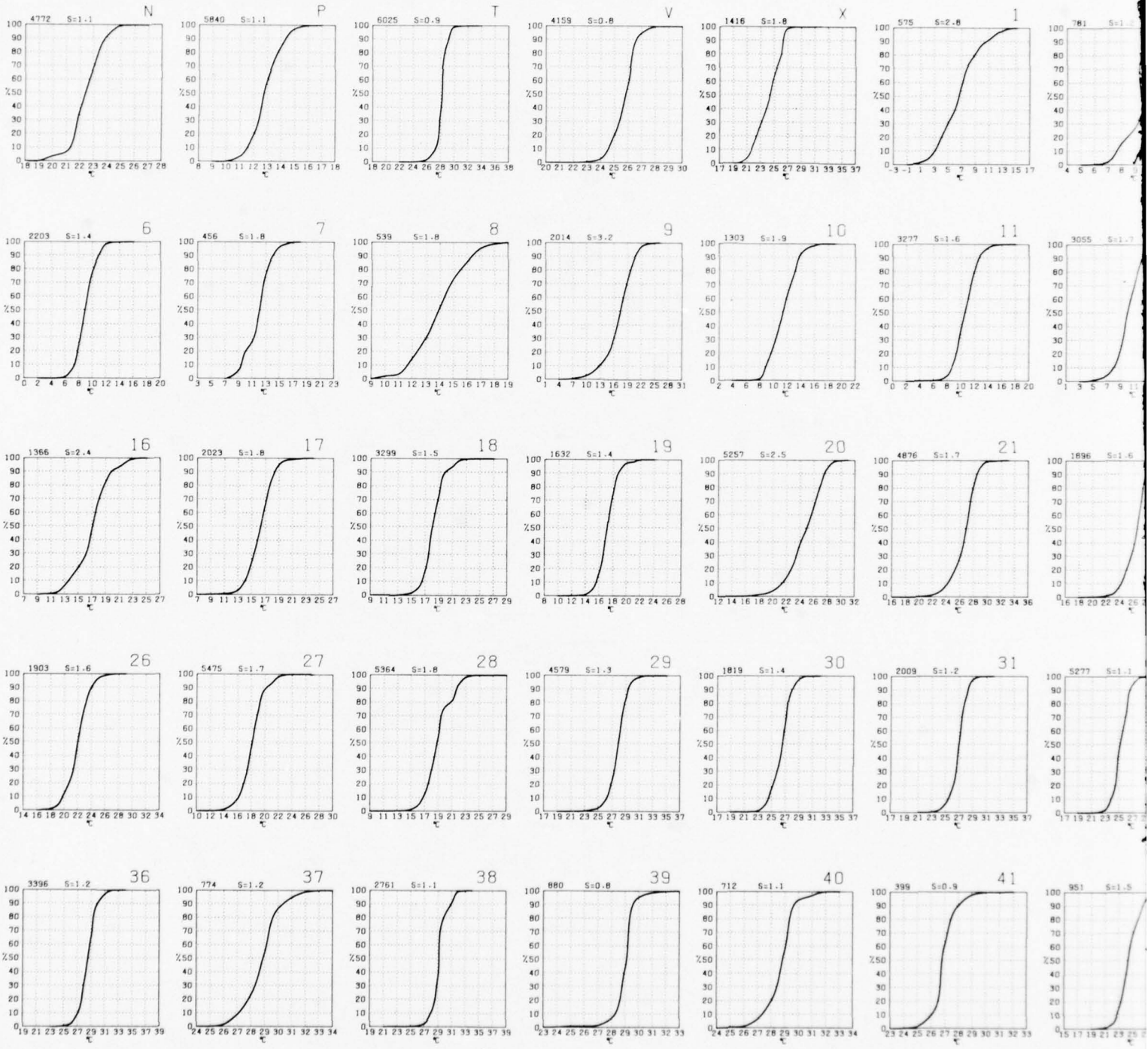
AUGUST


Sea surface temperature
Number of observations
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)
S: Standard deviation of sea surface temperatures (°C)
BLACK LINE - Mean sea surface temperature (°C)
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

SEA SURFACE TEMPERATURE

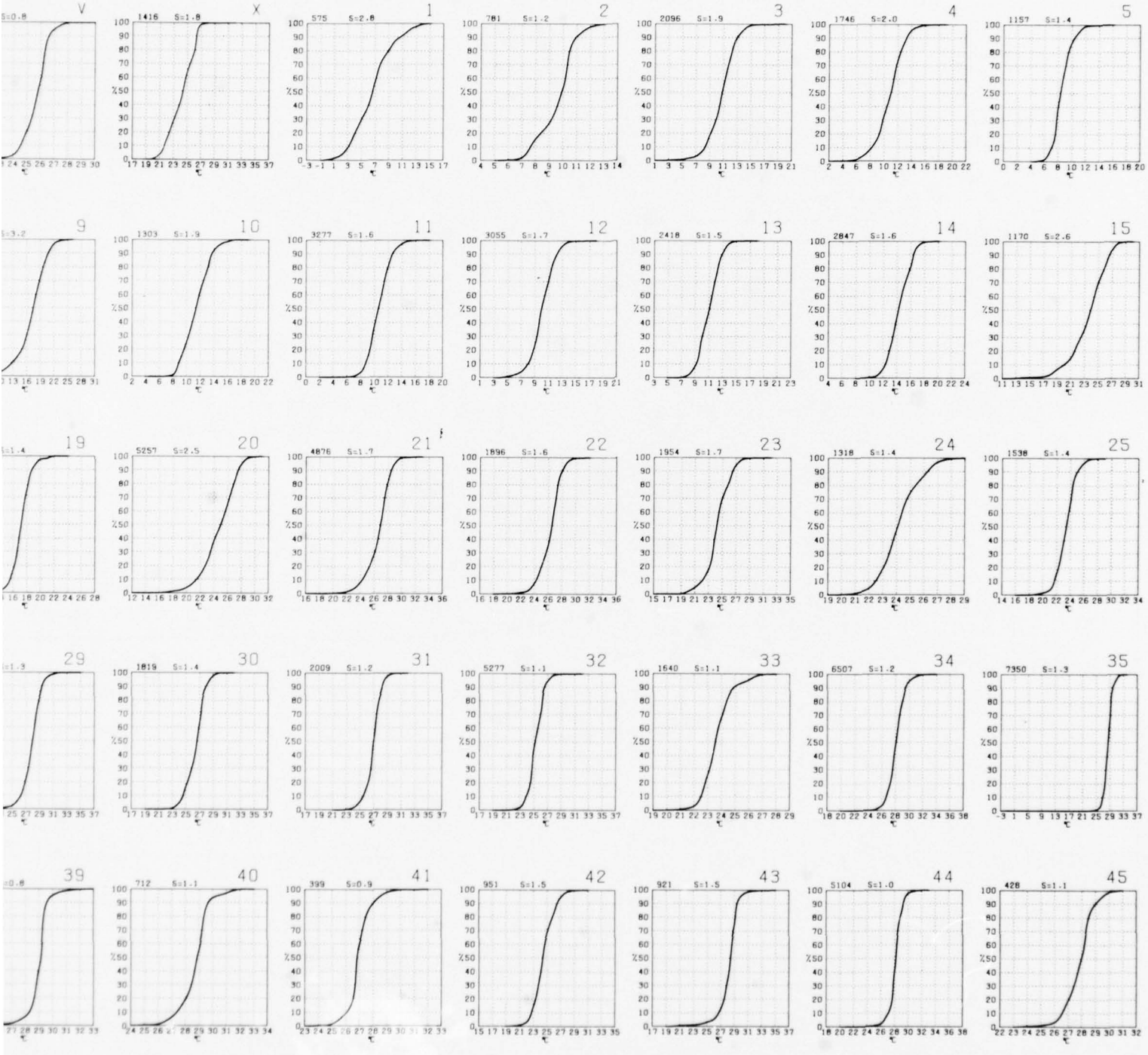


SEA SURFACE TEMPERATURE



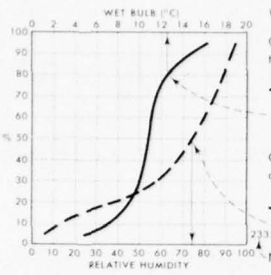
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

AUGUST



he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST



Wet bulb - Relative humidity

Cumulative percent frequency of wet bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

(80% of *all observed wet bulb temperatures were* ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

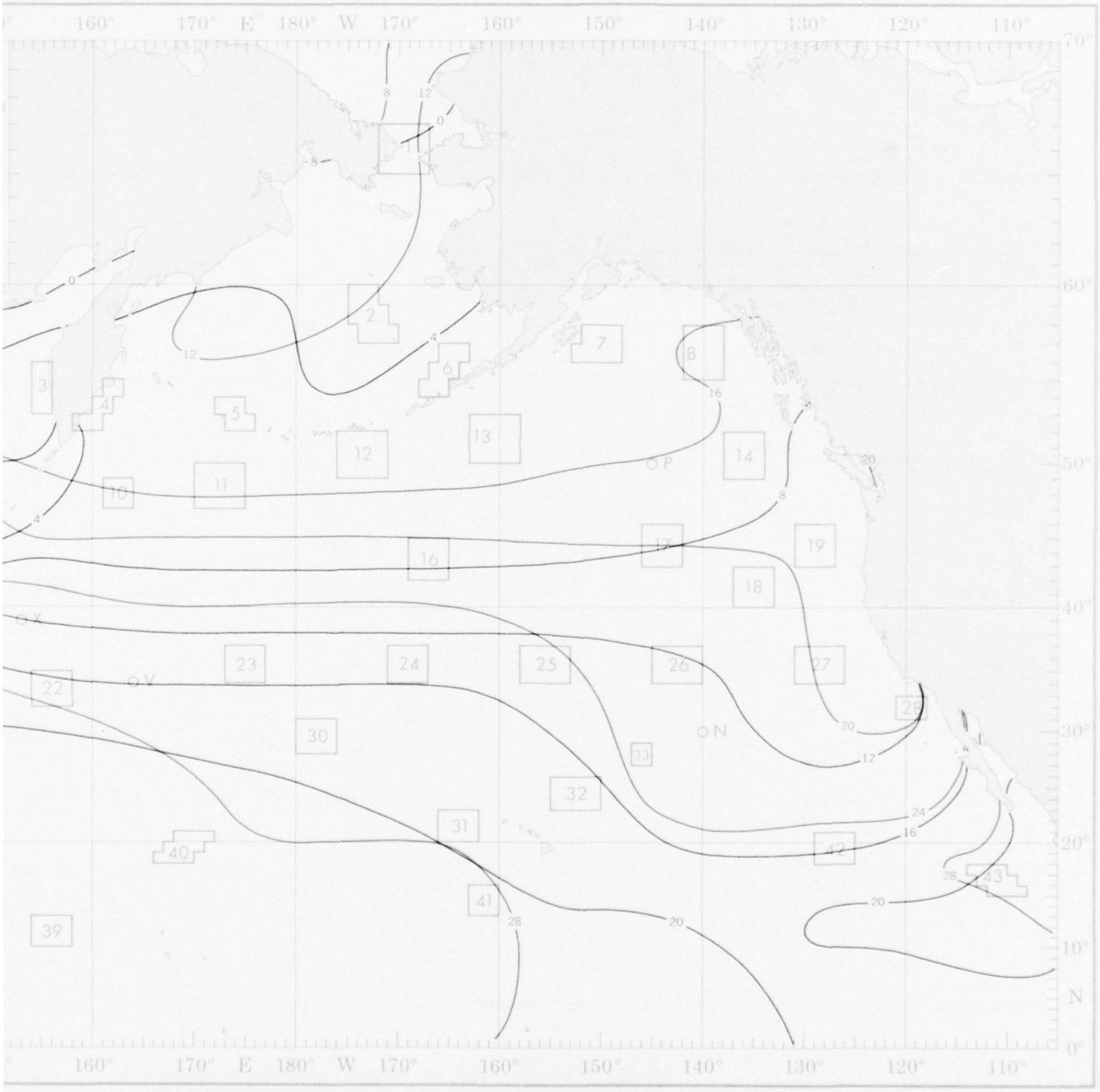
(50% of *all observed relative humidities were* ≤74%.)

Number of observations.

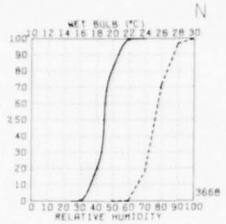
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

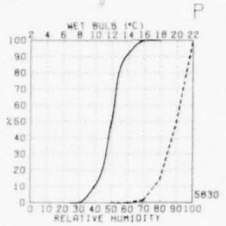
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

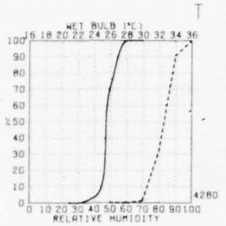
HUMIDITY

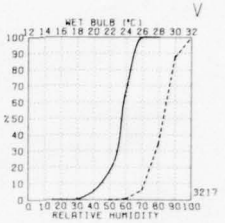

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
N
0°
8
12
0
-8
0
12
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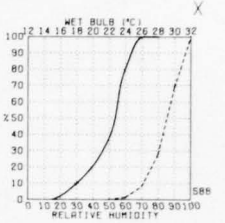
WET BULB AND RELATIVE HUMIDITY

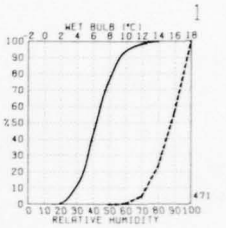


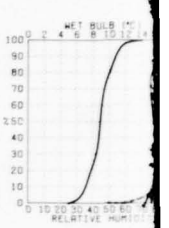


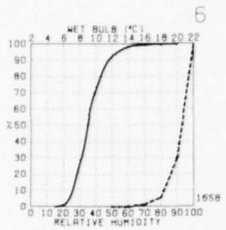


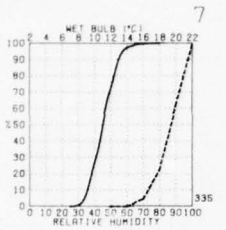


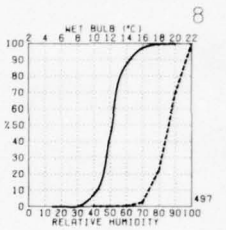


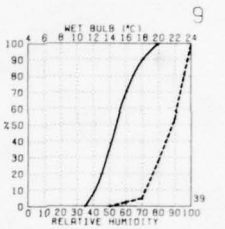


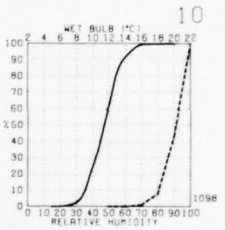


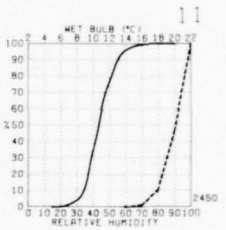


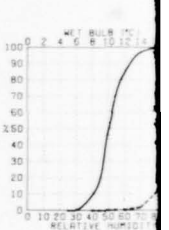


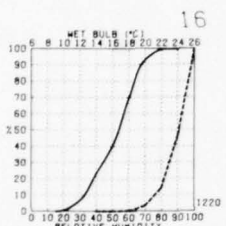


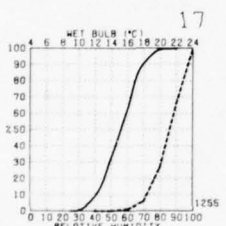


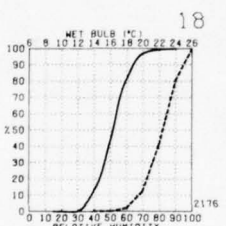


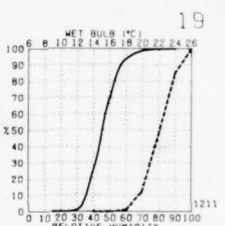


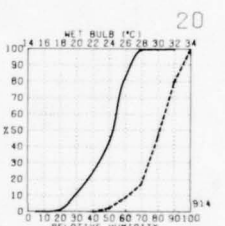


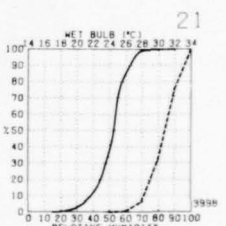


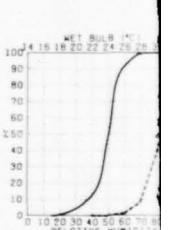


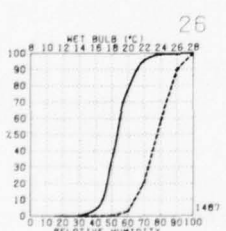


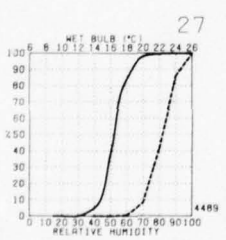


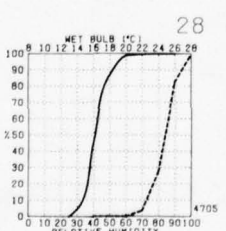


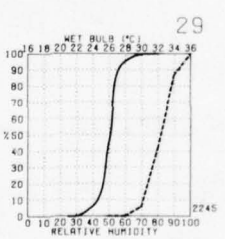


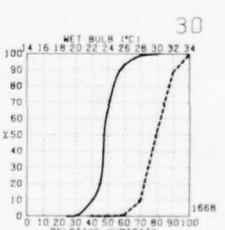


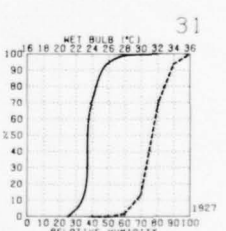


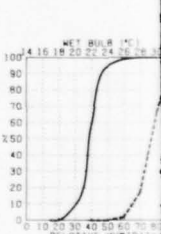


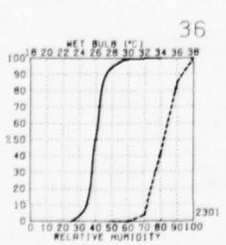


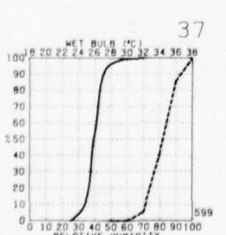


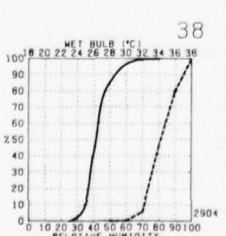


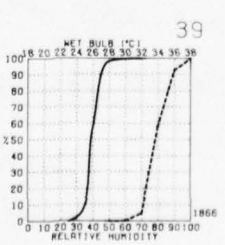


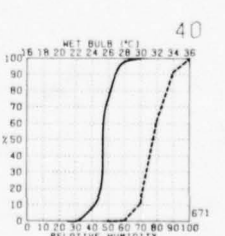


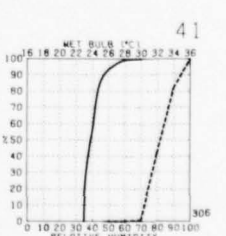


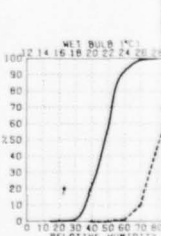




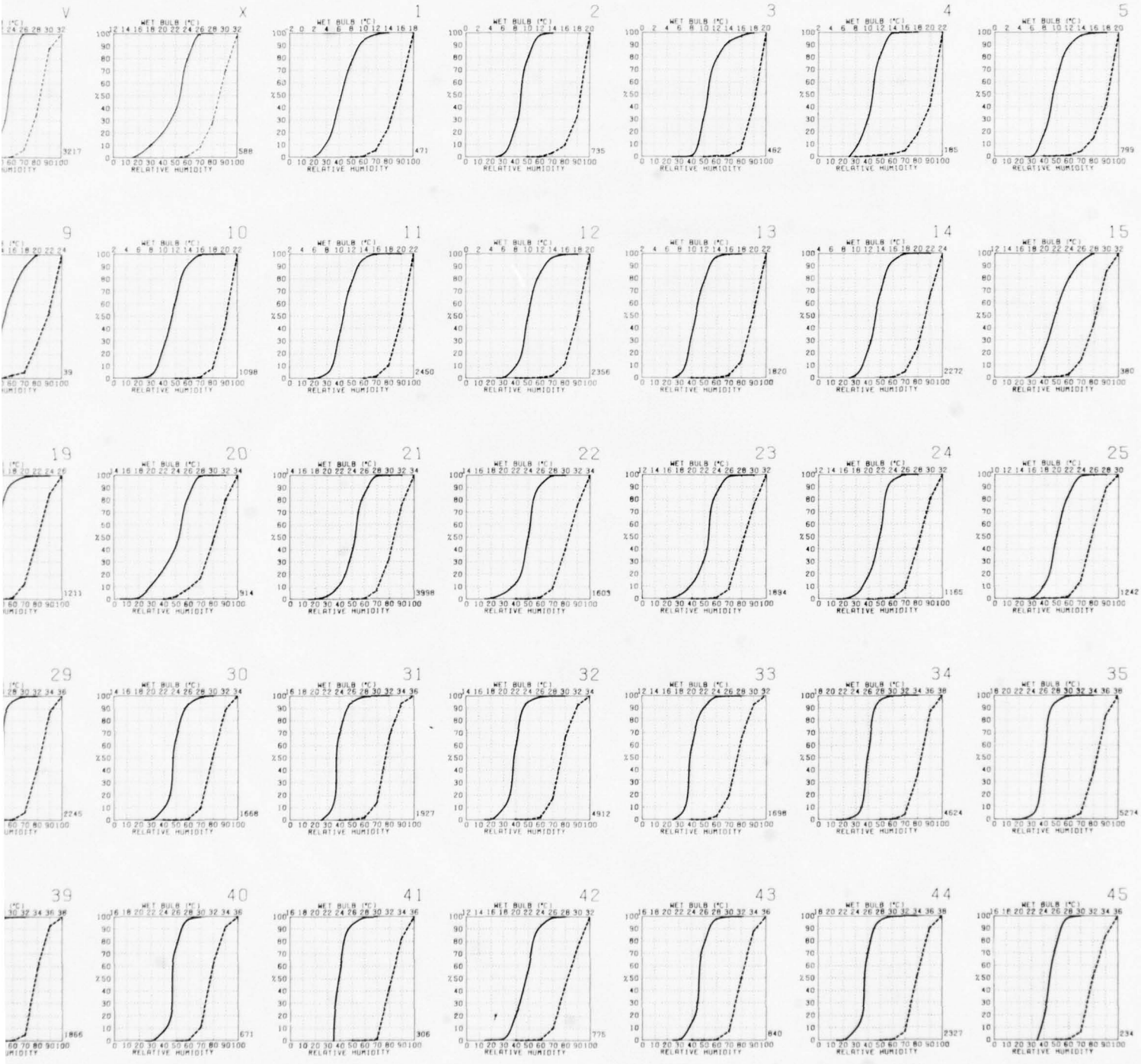






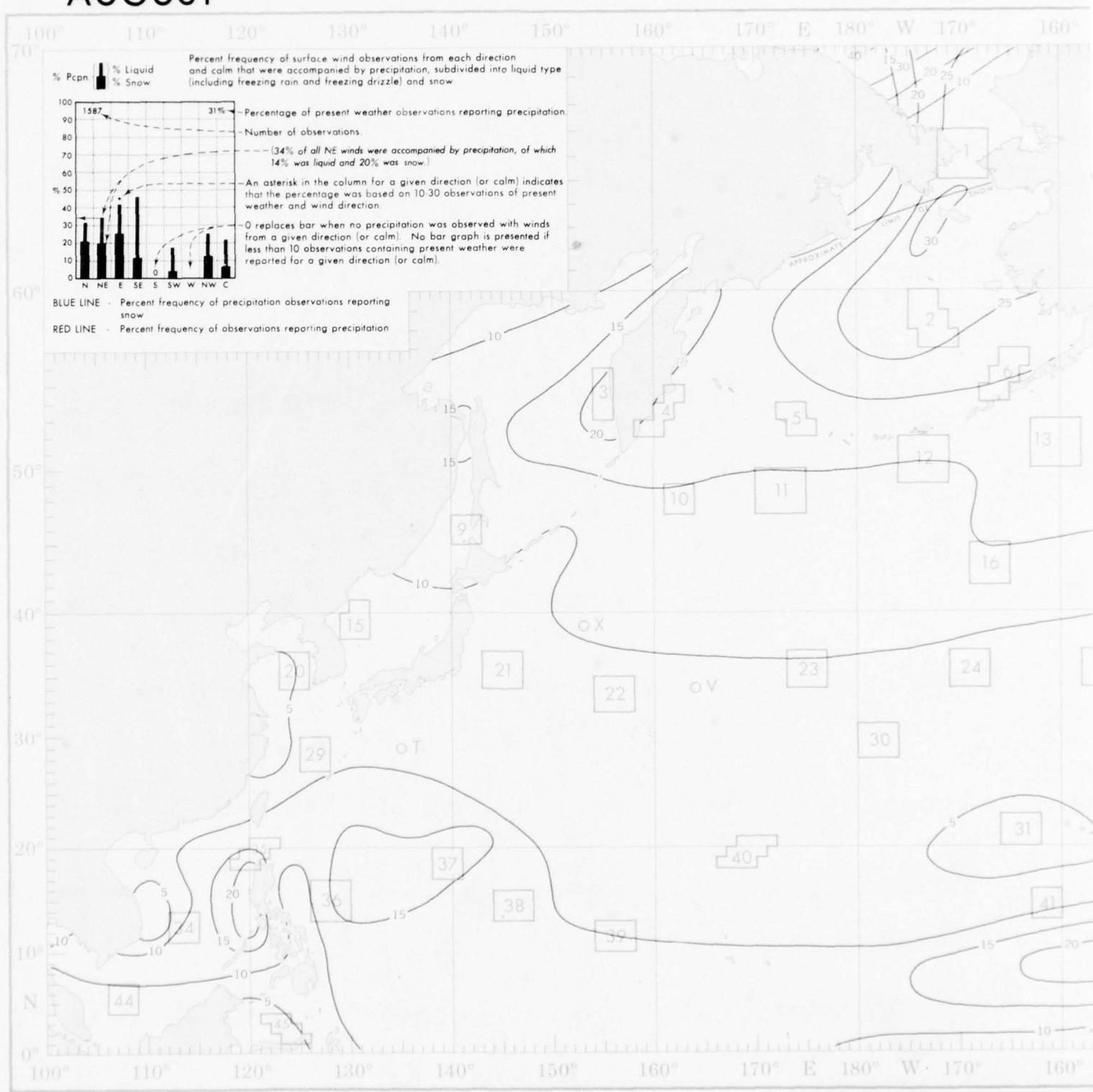


Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

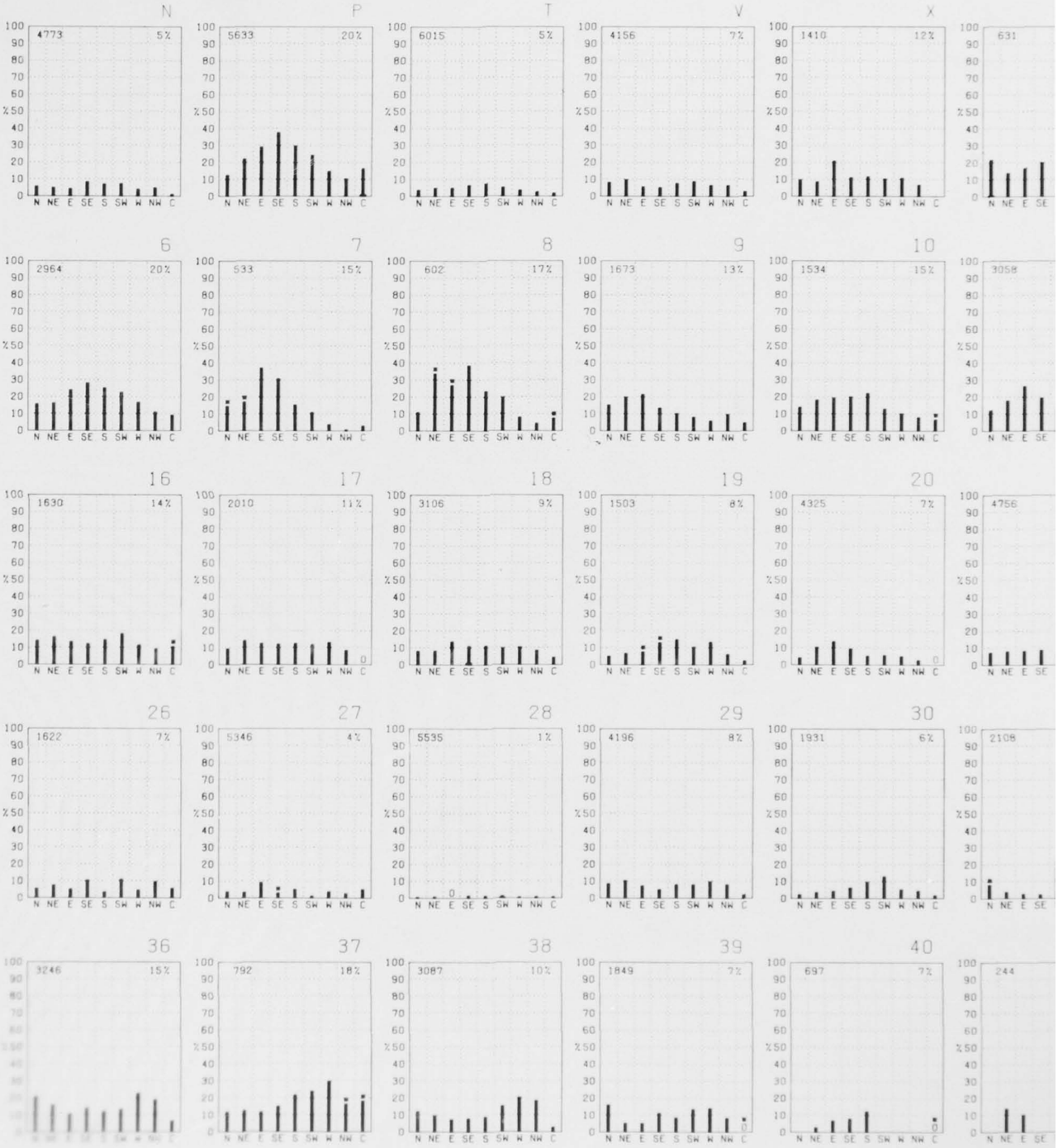
AUGUST


% Pcpn.
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE LIMIT OF SNOW

PRECIPITATION



PRECIPITATION



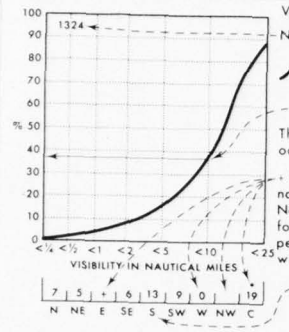
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AUGUST



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opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility *<2 nautical miles versus wind direction.*

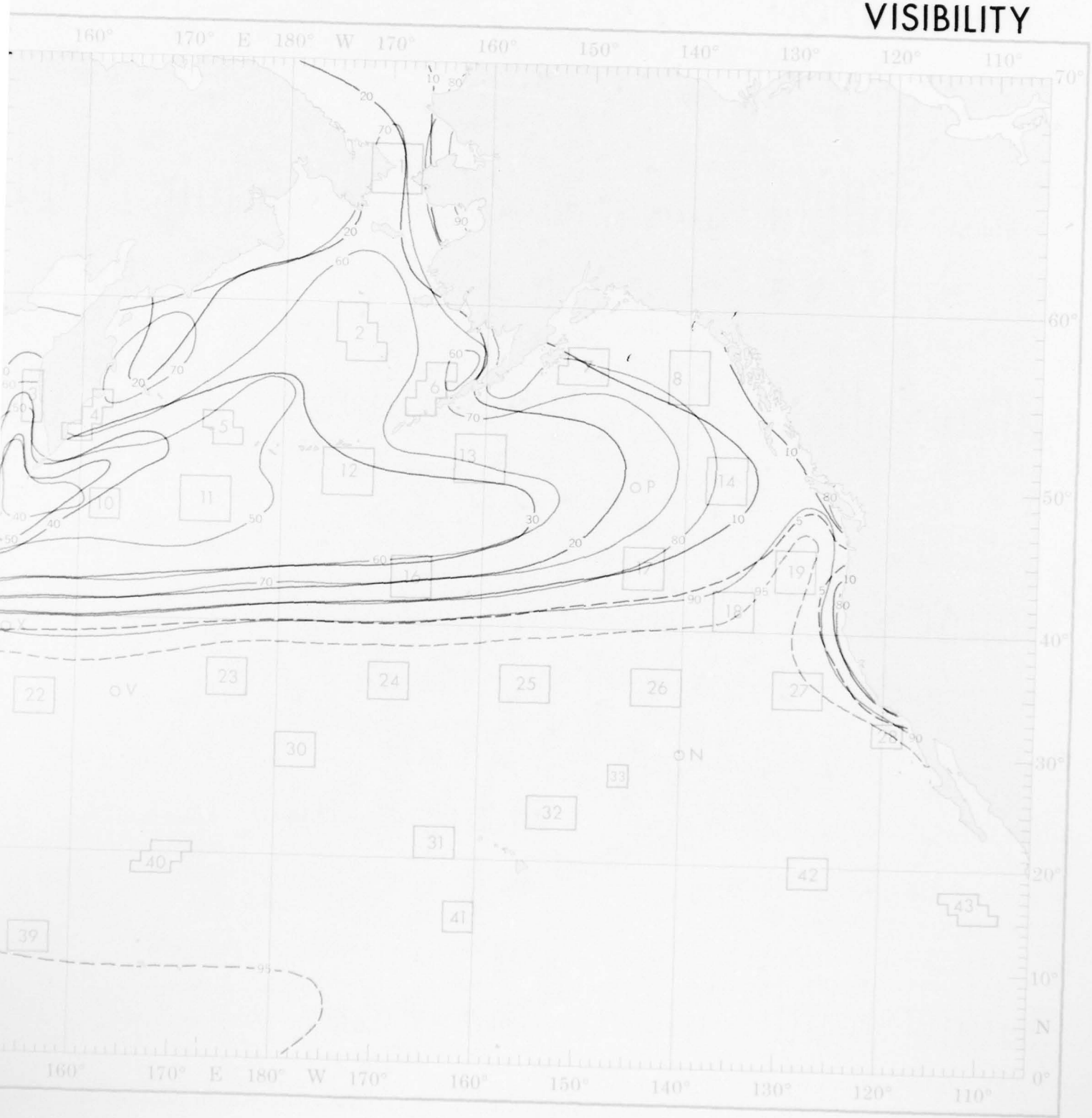
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

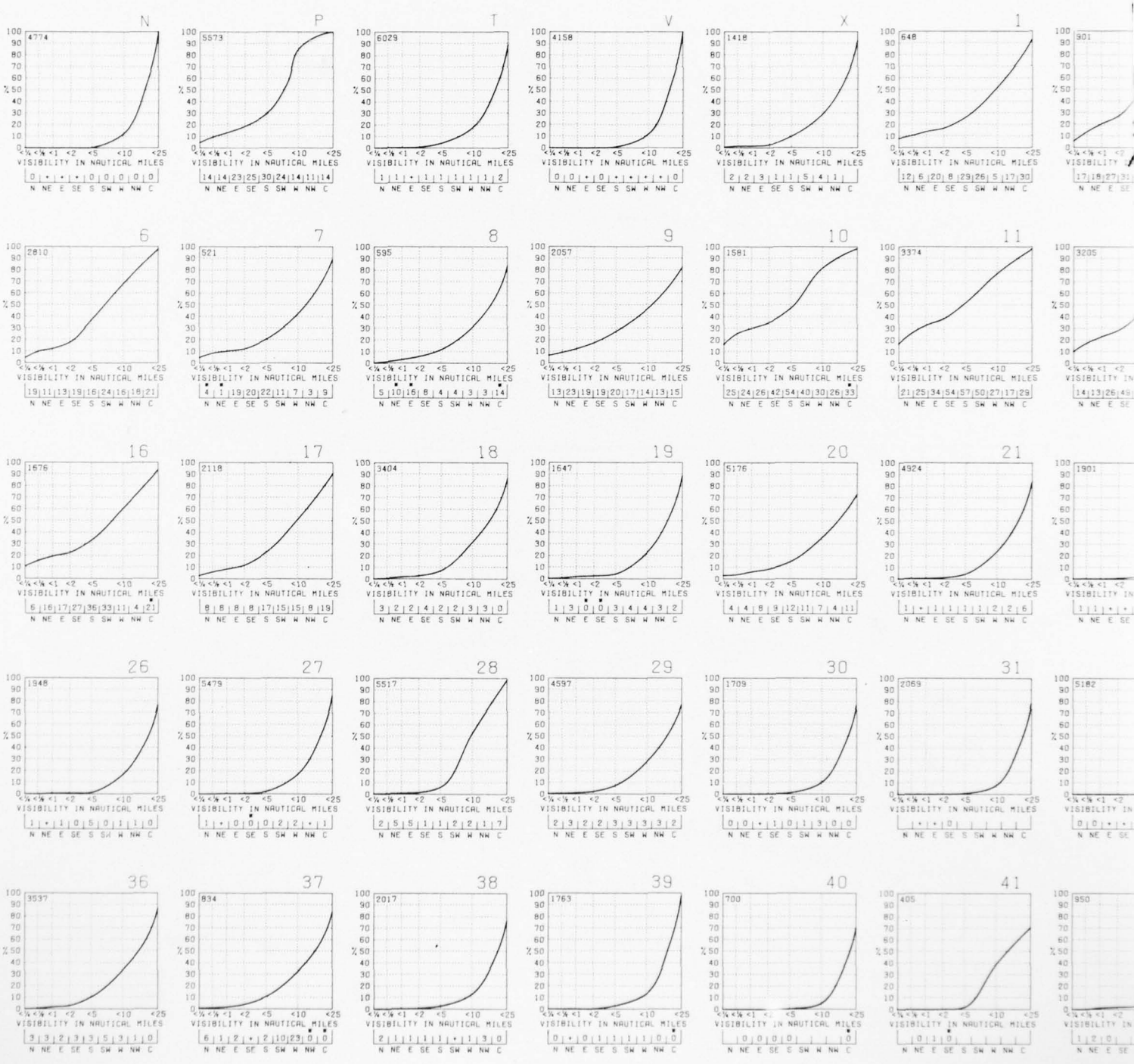
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles

VISIBILITY

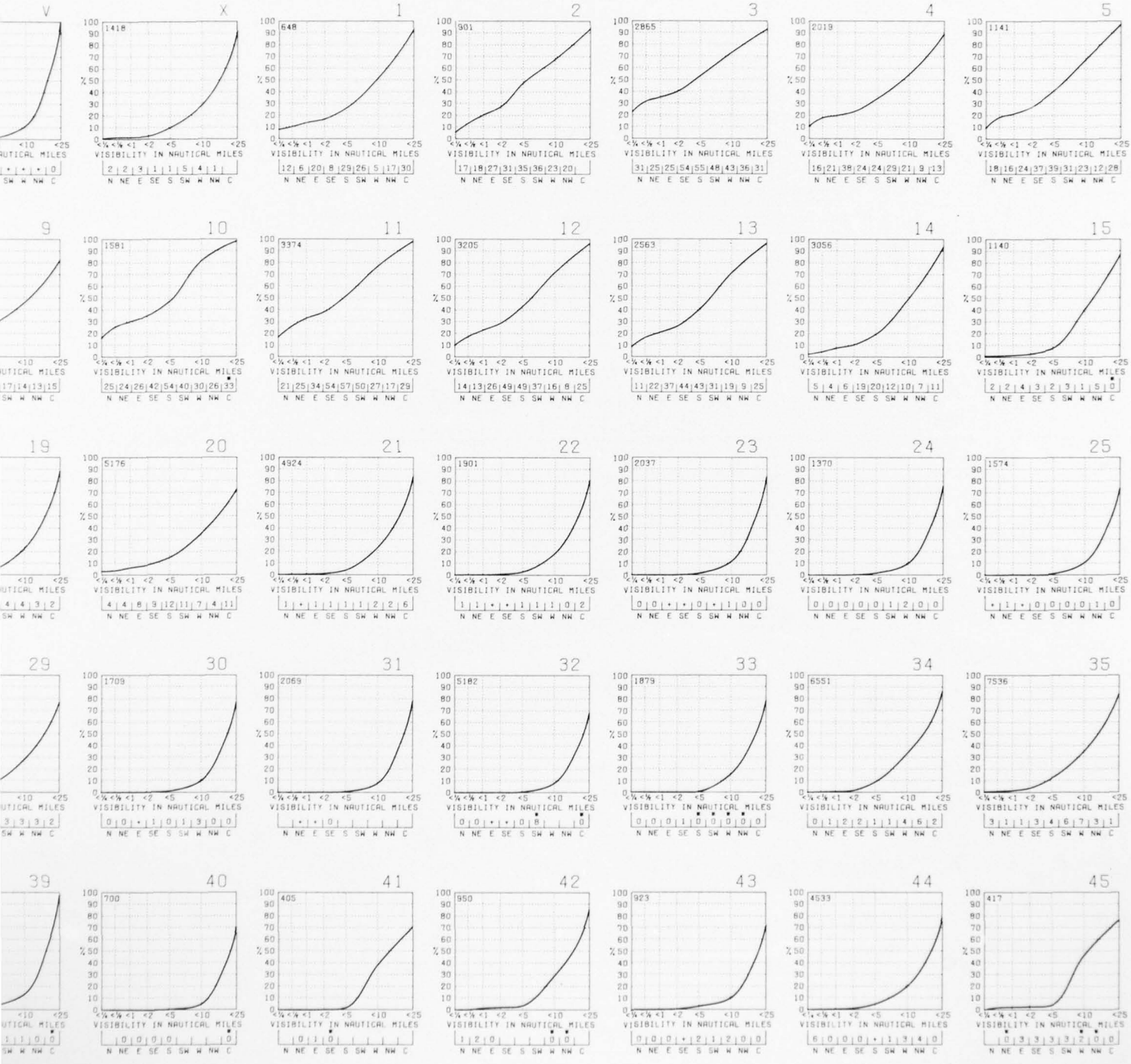

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
OP
OV
ON
OX

VISIBILITY



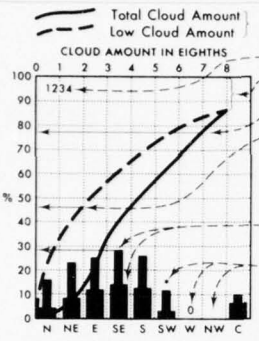
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AUGUST



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AUGUST



Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(*77% of all total cloud amounts were ≤7/8.*)

(*46% of all low cloud amounts were ≤2/8.*)

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

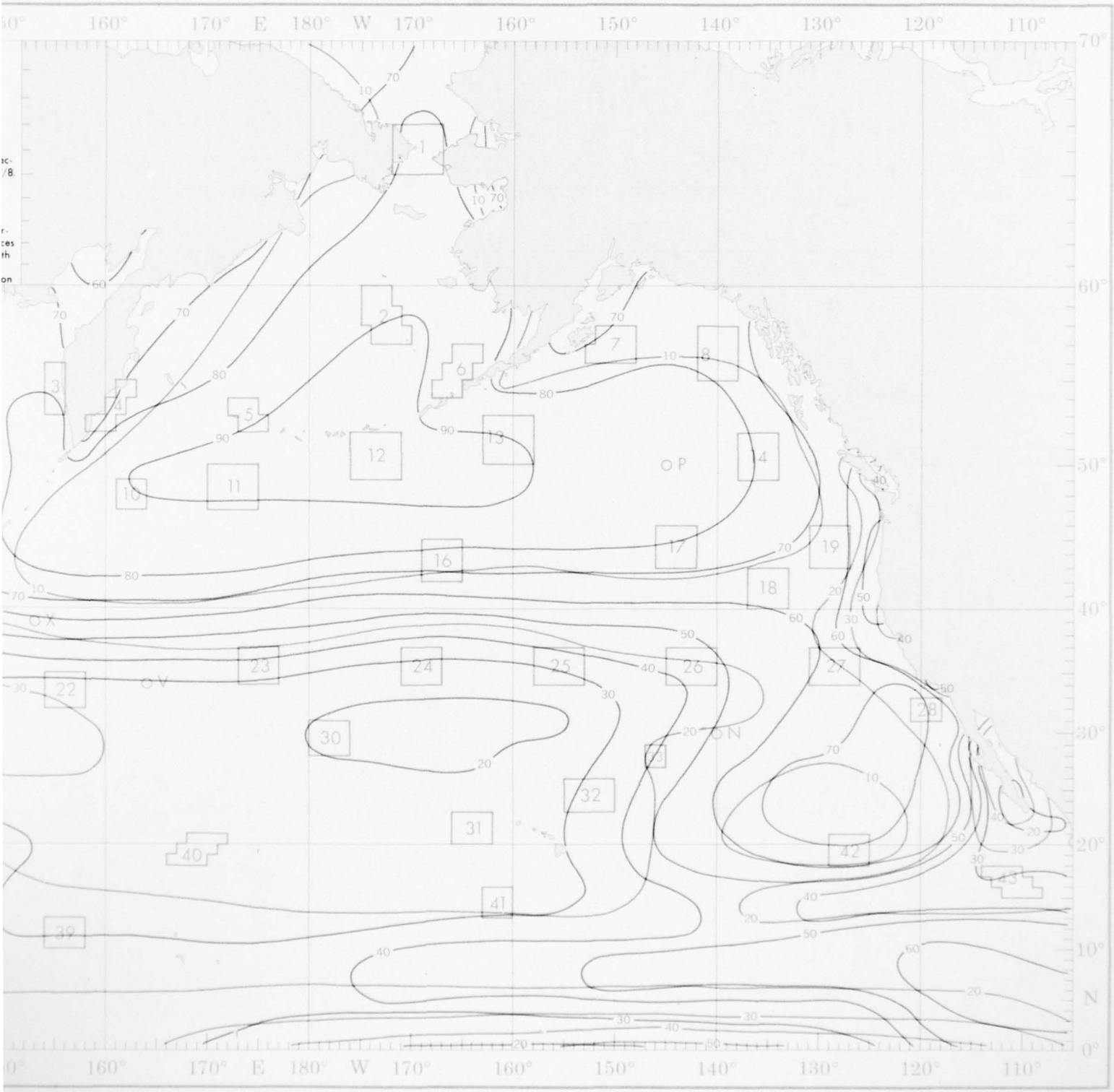
(*28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.*)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

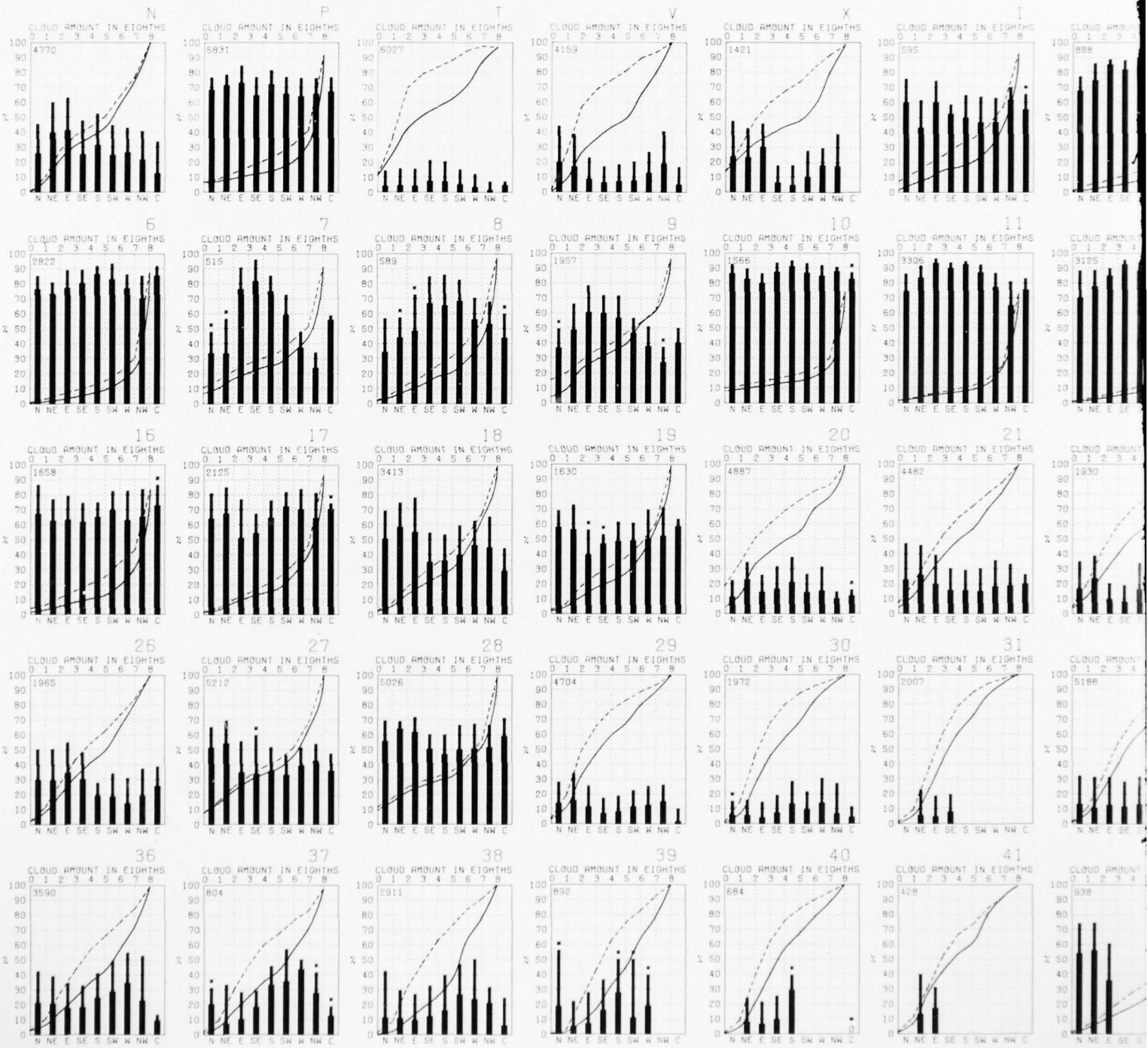
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

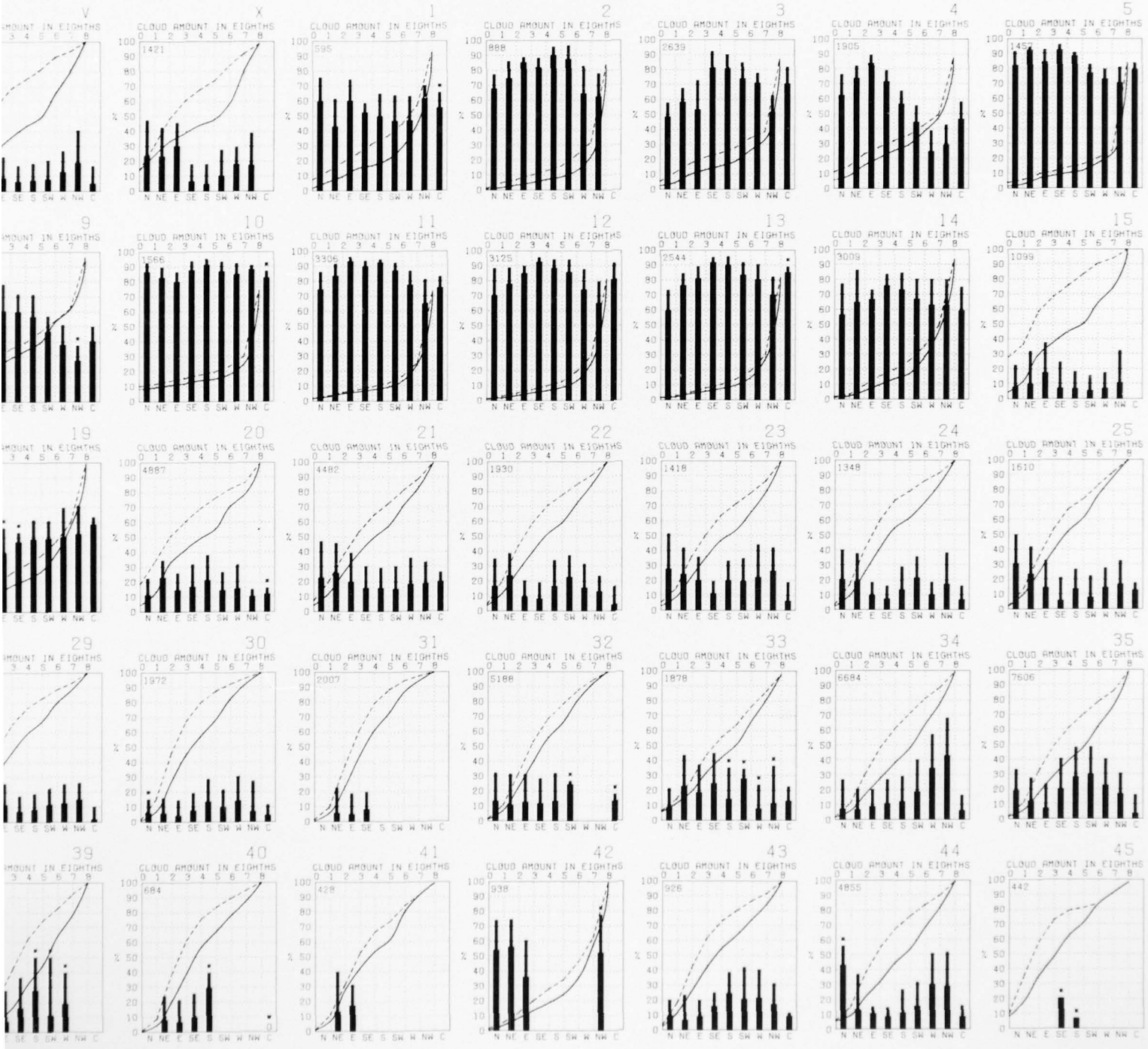

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° N 0°
1
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CLOUD COVER



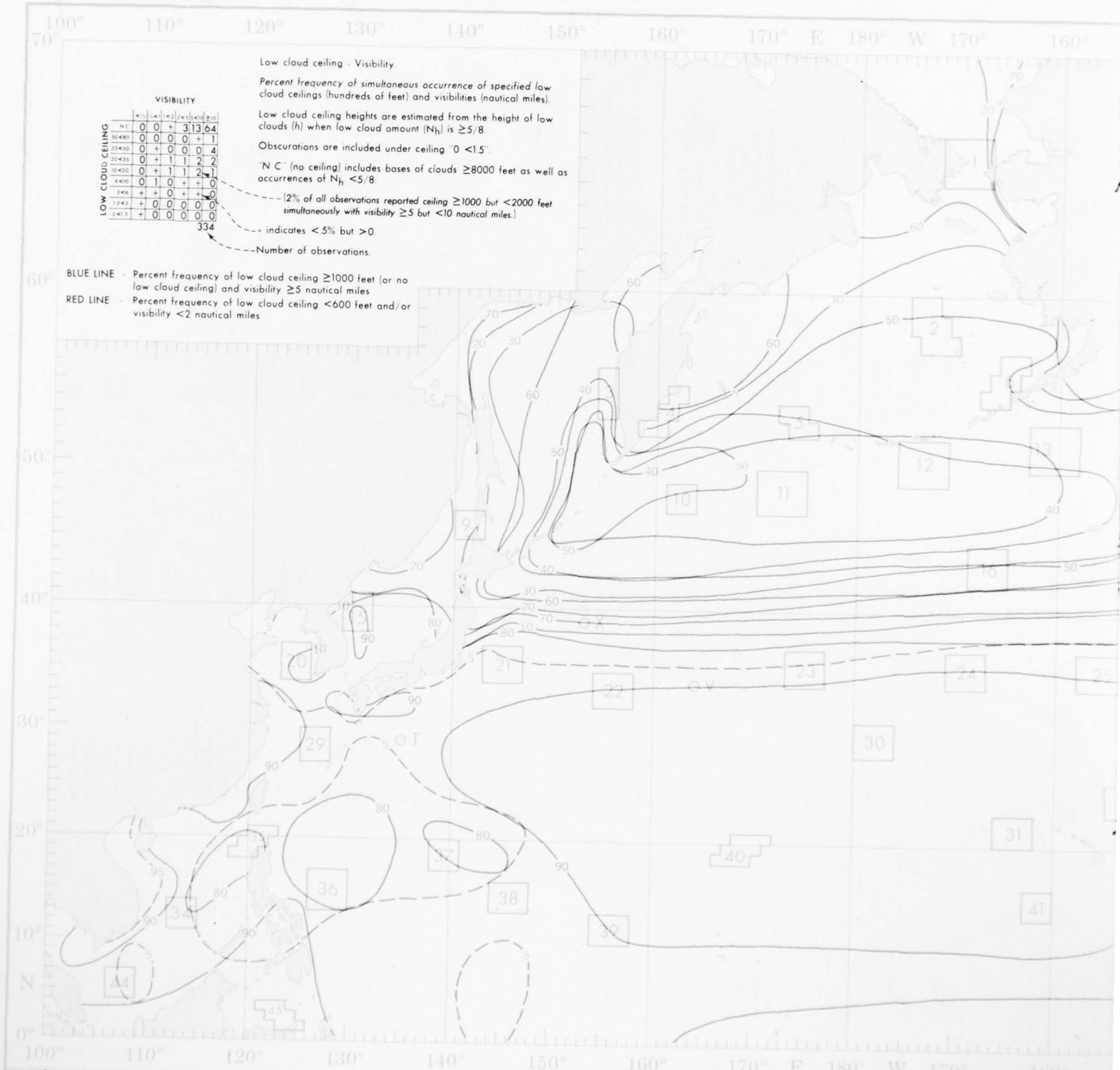
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AUGUST

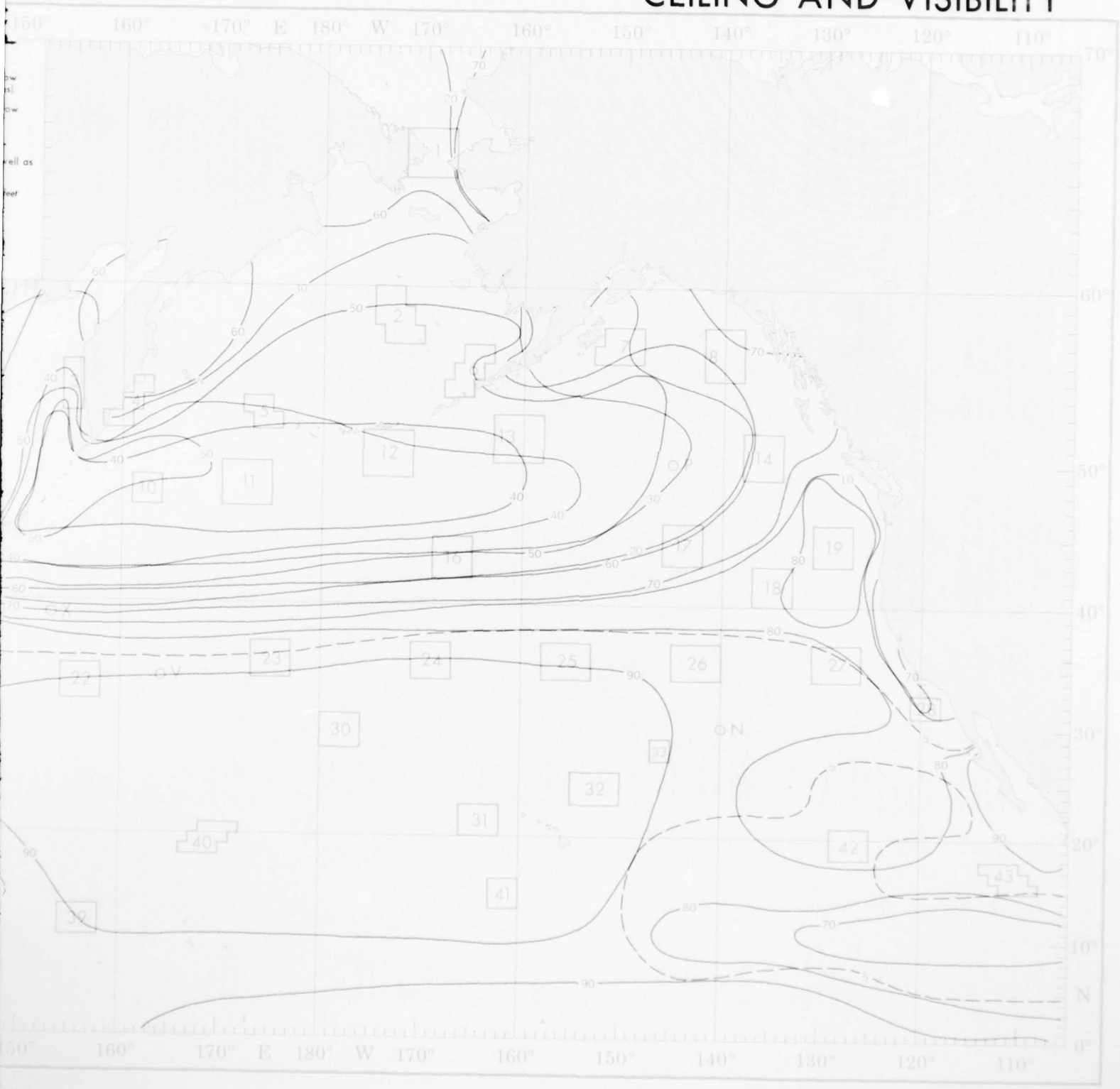


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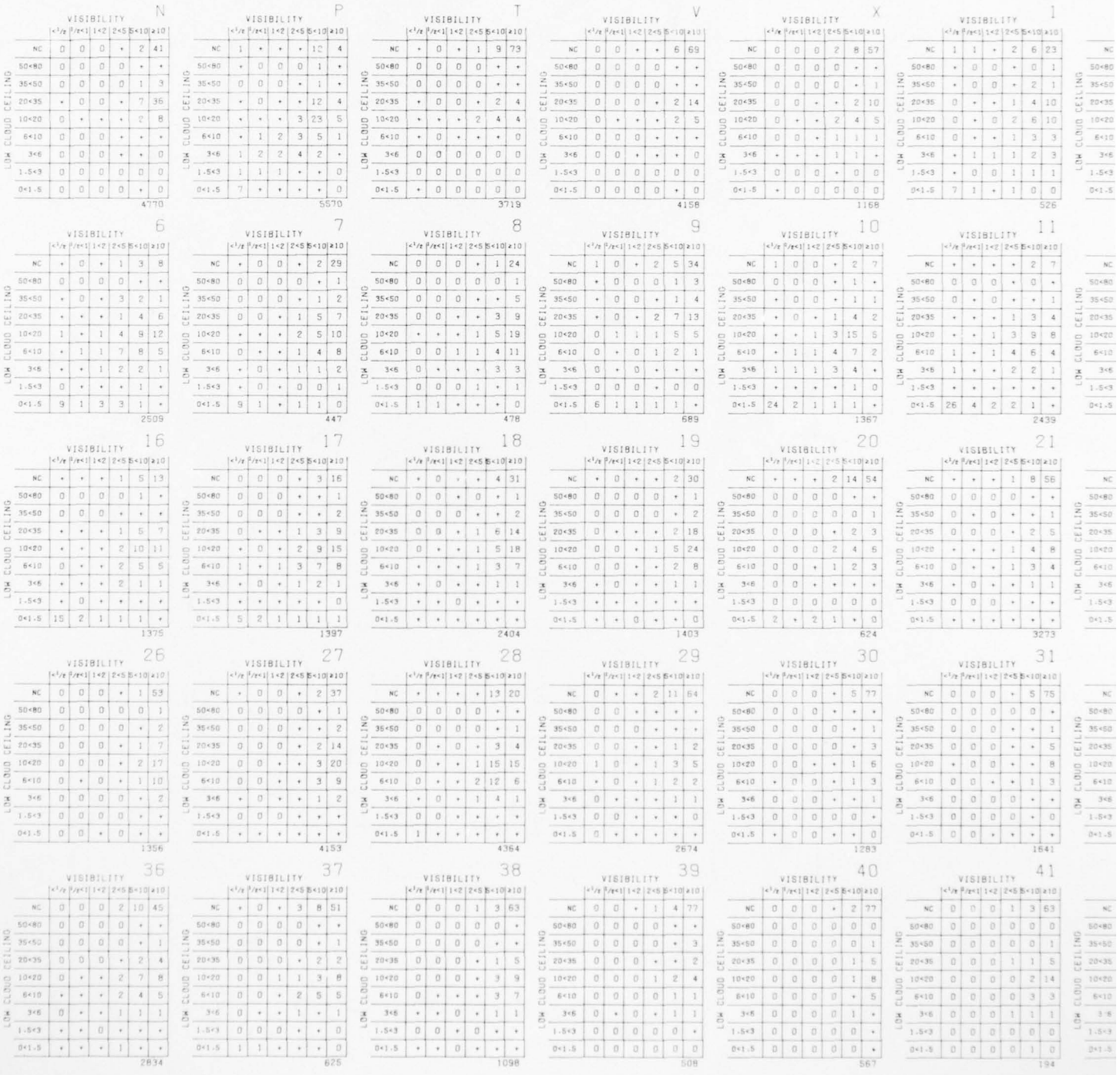
AUGUST


Low cloud ceiling - Visibility.
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0.
Number of observations.
334
VISIBILITY
LOW CLOUD CEILING
N C 0 0 + 3 13 64
30-<80 0 0 0 0 + 1
15-<30 0 + 0 0 0 4
20-<35 0 + 1 1 2 2
10-<20 0 + 1 1 2 1
5-<10 0 1 0 + + 0
3-<5 + + 0 + + 0
1.5-<3 + 0 0 0 0 0
0-<1.5 + 0 0 0 0 0
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

CEILING AND VISIBILITY

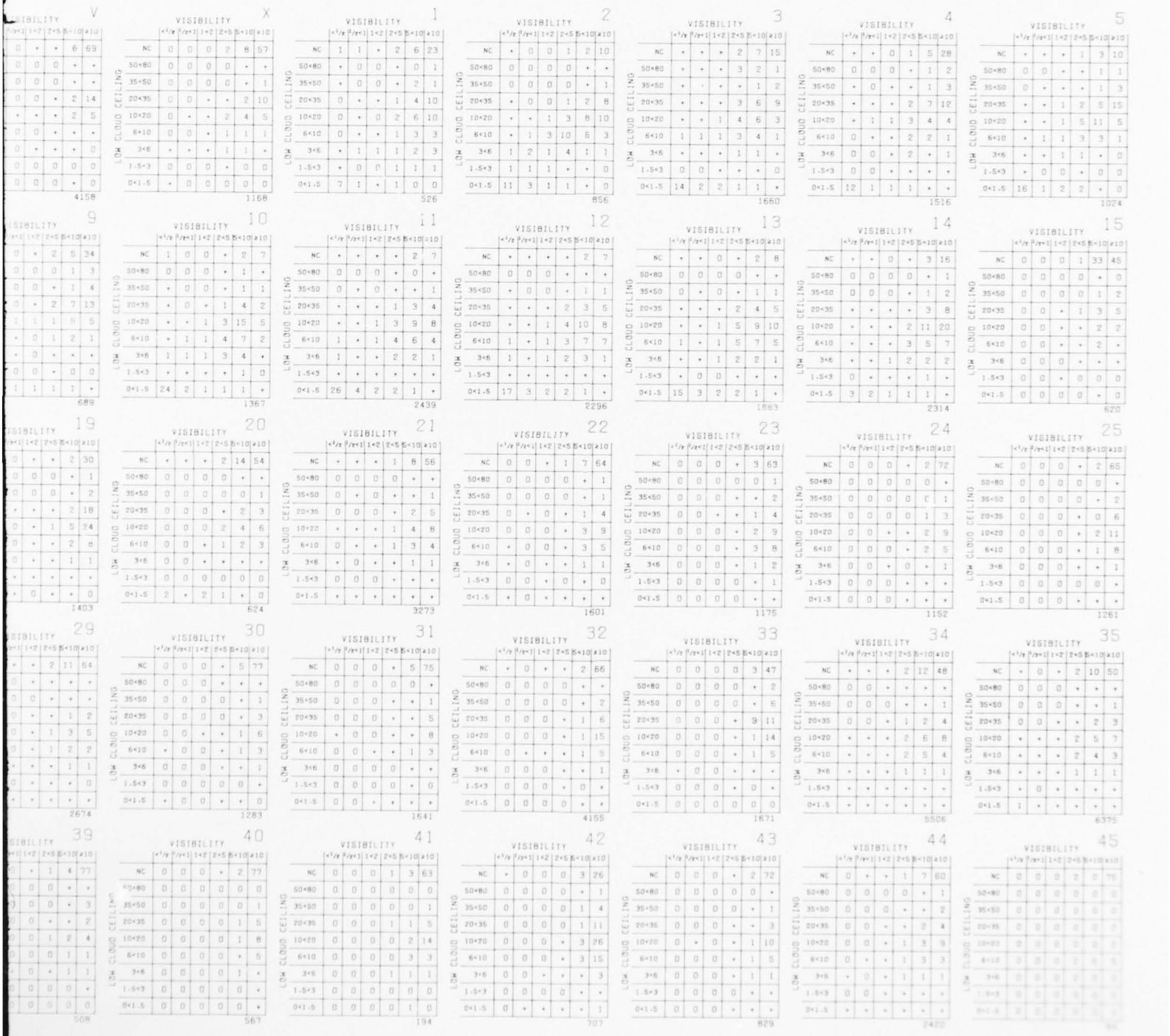


CEILING AND VISIBILITY



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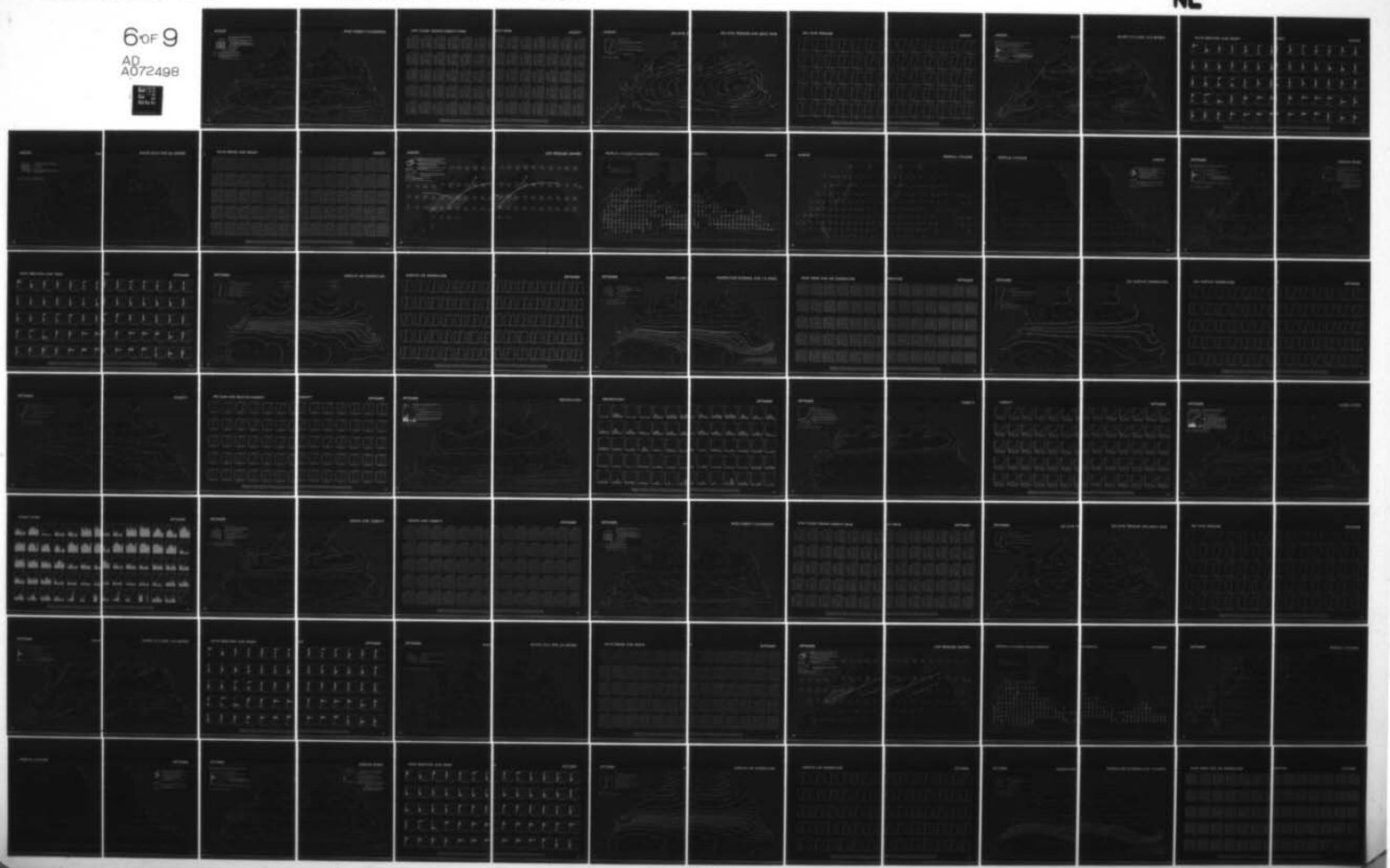
AUGUST

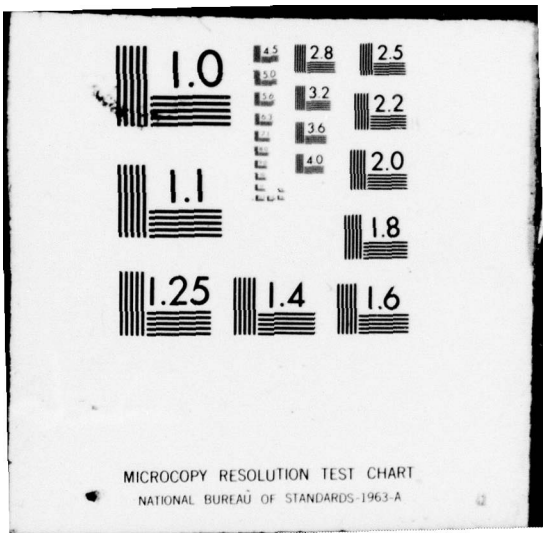


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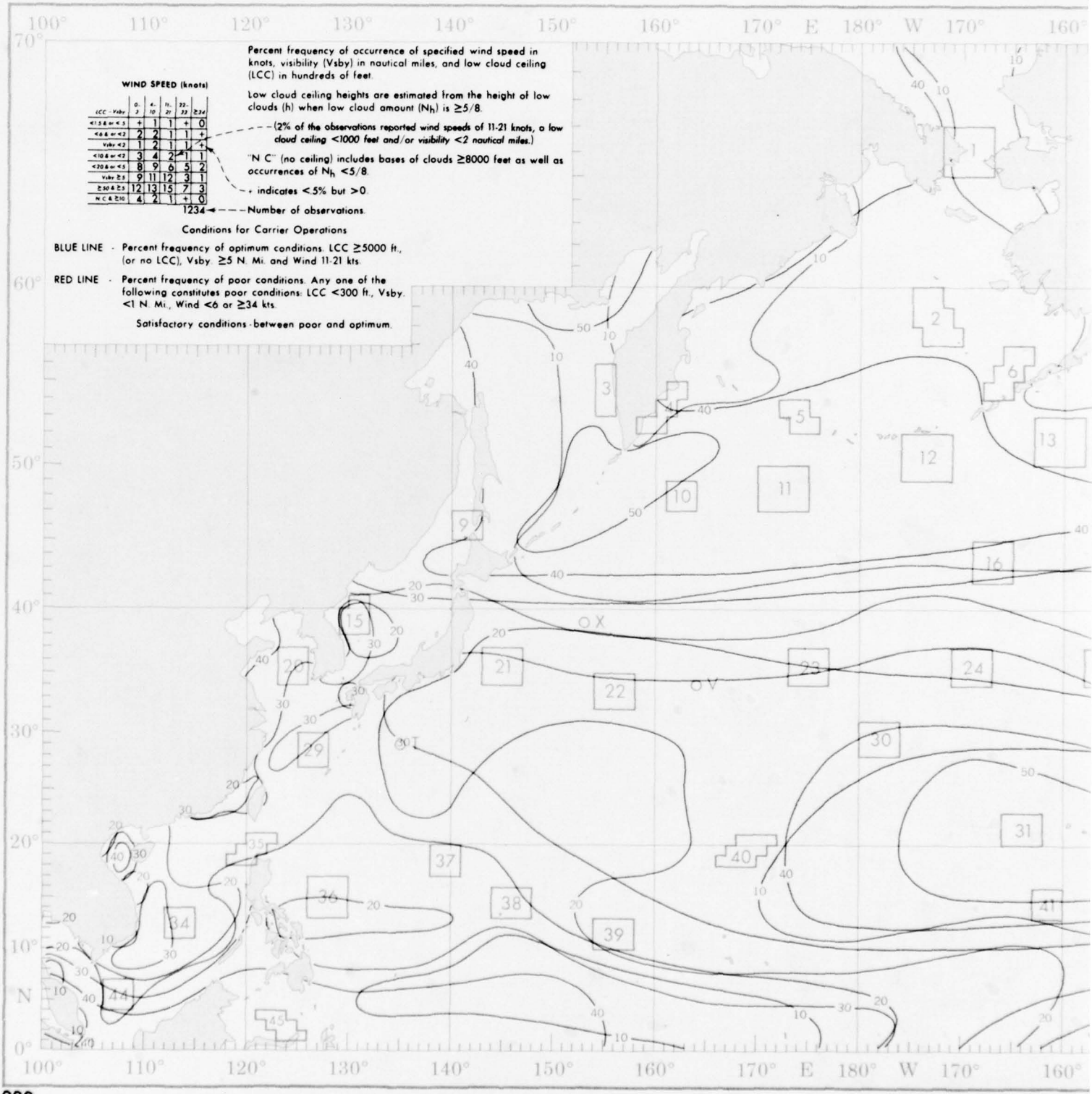
AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
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MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

AUGUST



WIND SPEED (knots)

LCC - Vsby	0-2	4-10	11-21	22-33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
N C & ≥10	4	2	1	+	0
	1234				

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <.5% but >0.

1234 ← Number of observations.

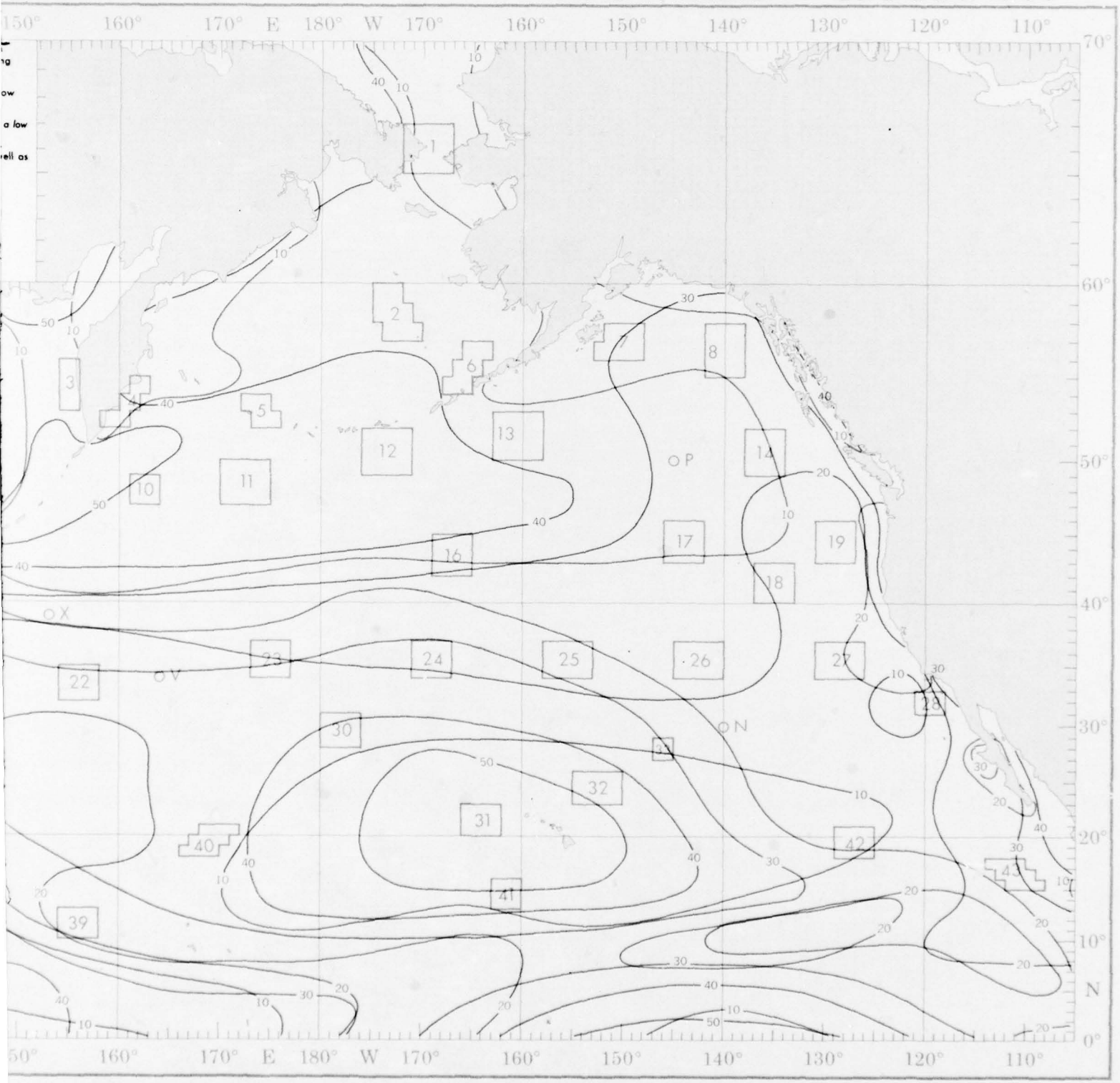
Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.

Satisfactory conditions - between poor and optimum.

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	+	+	+	+
<20 & OR <5	1	3	6	+	+
VSBY ≥5	10	38	50	2	+
≥50 & ≥5	7	20	17	+	0
NC & ≥10	7	19	15	+	0

4769

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	5	1	+
<6 & OR <2	1	5	14	6	+
VSBY <2	1	4	10	4	+
<10 & OR <2	1	6	18	8	1
<20 & OR <5	2	13	34	16	2
VSBY ≥5	4	17	34	14	2
≥50 & ≥5	1	5	8	3	+
NC & ≥10	+	1	2	1	0

5562

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	5	4	2
VSBY ≥5	4	33	44	13	2
≥50 & ≥5	4	31	38	8	1
NC & ≥10	4	29	34	6	+

3718

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	+	+	+	+
VSBY <2	+	0	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	5	1	+
VSBY ≥5	8	42	43	6	+
≥50 & ≥5	7	33	32	4	+
NC & ≥10	7	30	29	3	+

4156

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	3	+	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	1	5	1	0
<20 & OR <5	1	4	12	4	+
VSBY ≥5	4	31	48	10	+
≥50 & ≥5	3	24	32	6	+
NC & ≥10	3	22	28	5	0

1166

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	2	4	2	+
<6 & OR <2	5	5	10	4	+
VSBY <2	3	3	7	2	+
<10 & OR <2	5	6	14	5	+
<20 & OR <5	6	14	23	9	1
VSBY ≥5	8	26	30	11	+
≥50 & ≥5	4	14	11	2	0
NC & ≥10	3	11	8	2	0

510

WIN

LCC - VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	9	2	+
<6 & OR <2	2	7	14	4	1
VSBY <2	1	6	9	2	1
<10 & OR <2	2	13	23	8	1
<20 & OR <5	3	23	36	11	1
VSBY ≥5	3	22	30	6	+
≥50 & ≥5	+	4	5	1	+
NC & ≥10	+	3	3	1	+

2497

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	5	2	0
<6 & OR <2	1	7	7	3	+
VSBY <2	1	4	5	2	+
<10 & OR <2	3	11	12	5	+
<20 & OR <5	4	18	21	8	+
VSBY ≥5	8	31	32	9	0
≥50 & ≥5	5	12	12	3	0
NC & ≥10	5	11	11	3	0

445

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	+	1	+
<6 & OR <2	1	3	5	3	1
VSBY <2	1	1	1	2	+
<10 & OR <2	2	10	13	5	1
<20 & OR <5	3	21	26	6	1
VSBY ≥5	8	36	41	5	+
≥50 & ≥5	4	10	12	1	0
NC & ≥10	4	9	11	1	0

471

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	4	4	1	0
<6 & OR <2	2	6	5	1	0
VSBY <2	1	4	4	1	0
<10 & OR <2	2	8	7	2	0
<20 & OR <5	3	13	15	3	+
VSBY ≥5	12	34	32	4	0
≥50 & ≥5	8	19	14	0	0
NC & ≥10	7	15	10	0	0

504

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	12	14	2	+
<6 & OR <2	3	17	21	4	1
VSBY <2	3	13	15	3	1
<10 & OR <2	3	23	26	5	1
<20 & OR <5	5	33	36	7	1
VSBY ≥5	3	24	23	4	+
≥50 & ≥5	1	5	4	1	0
NC & ≥10	+	3	3	+	0

1365

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	16	15	4	+
<6 & OR <2	2	18	18	6	1
VSBY <2	2	16	16	4	+
<10 & OR <2	3	23	27	8	1
<20 & OR <5	4	32	37	10	1
VSBY ≥5	2	19	22	4	+
≥50 & ≥5	1	4	4	1	+
NC & ≥10	+	3	3	+	+

2426

WIND

LCC - VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	10	2	+
<6 & OR <2	2	10	15	4	+
VSBY <2	1	8	10	3	+
<10 & OR <2	2	14	20	5	+
<20 & OR <5	3	24	31	8	+
VSBY ≥5	4	26	31	6	+
≥50 & ≥5	1	8	10	1	+
NC & ≥10	1	6	6	+	0

1367

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	5	6	+	0
<6 & OR <2	2	7	9	1	+
VSBY <2	1	4	5	1	+
<10 & OR <2	3	13	18	3	+
<20 & OR <5	4	24	32	5	+
VSBY ≥5	5	33	38	4	1
≥50 & ≥5	1	10	8	1	+
NC & ≥10	1	8	6	1	+

1390

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	0	0
<6 & OR <2	+	2	2	0	0
VSBY <2	+	1	1	0	0
<10 & OR <2	1	7	8	1	0
<20 & OR <5	2	18	20	2	0
VSBY ≥5	8	41	41	4	0
≥50 & ≥5	5	17	13	1	0
NC & ≥10	4	15	11	1	0

2394

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	0
<6 & OR <2	+	2	2	+	0
VSBY <2	+	1	1	+	0
<10 & OR <2	1	6	7	1	0
<20 & OR <5	2	18	21	4	+
VSBY ≥5	5	38	46	7	+
≥50 & ≥5	2	14	14	2	+
NC & ≥10	2	13	13	2	+

1391

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	0
<6 & OR <2	+	3	3	+	+
VSBY <2	+	3	2	0	+
<10 & OR <2	1	5	6	1	+
<20 & OR <5	2	10	10	3	+
VSBY ≥5	11	41	32	5	0
≥50 & ≥5	9	34	23	2	0
NC & ≥10	7	27	18	2	0

614

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	3	6	2	1
<20 & OR <5	1	7	13	5	1
VSBY ≥5	5	32	47	11	1
≥50 & ≥5	4	24	30	6	+
NC & ≥10	3	21	27	5	+

3262

WIND

LCC - VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	1	6	7	1	0
<20 & OR <5	3	16	15	1	0
VSBY ≥5	11	52	35	2	+
≥50 & ≥5	7	31	17	1	+
NC & ≥10	7	30	16	1	0

1347

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	2	2	+	+
VSBY <2	+	+	+	+	0
<10 & OR <2	1	5	9	2	+
<20 & OR <5	2	12	23	5	+
VSBY ≥5	5	32	51	10	+
≥50 & ≥5	3	15	19	4	+
NC & ≥10	3	14	17	4	+

4128

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	1	4	3	+	0
VSBY <2	+	1	+	+	0
<10 & OR <2	2	13	12	1	0
<20 & OR <5	5	28	25	1	0
VSBY ≥5	7	41	43	3	0
≥50 & ≥5	2	12	17	2	0
NC & ≥10	1	7	10	1	0

4346

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	1
<6 & OR <2	+	1	1	1	1
VSBY <2	+	+	+	+	1
<10 & OR <2	+	2	3	3	2
<20 & OR <5	1	5	7	5	2
VSBY ≥5	7	40	37	8	1
≥50 & ≥5	7	34	30	4	+
NC & ≥10	5	30	26	3	+

2662

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	3	1	0
<20 & OR <5	1	4	7	1	0
VSBY ≥5	8	42	46	2	0
≥50 & ≥5	7	37	37	1	0
NC & ≥10	7	35	34	1	0

1281

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	1	3	1	0
<20 & OR <5	0	3	9	1	0
VSBY ≥5	1	23	71	5	0
≥50 & ≥5	1	19	57	3	0
NC & ≥10	1	17	54	3	0

1636

WIND

LCC - VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	2	3	1	0
VSBY <2	+	1	1	+	0
<10 & OR <2	1	6	8	3	+
<20 & OR <5	2	13	16	6	+
VSBY ≥5	8	41	33	8	+
≥50 & ≥5	6	28	18	3	+
NC & ≥10	5	24	14	2	+

2825

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	2	0
<6 & OR <2	0	2	3	3	+
VSBY <2	0	1	1	3	+
<10 & OR <2	+	5	8	6	1
<20 & OR <5	1	9	17	8	1
VSBY ≥5	7	41	31	7	1
≥50 & ≥5	6	32	18	3	+
NC & ≥10	6	27	16	1	+

620

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	0	+
<10 & OR <2	1	6	5	1	+
<20 & OR <5	2	13	9	1	+
VSBY ≥5	12	54	29	2	+
≥50 & ≥5	9	39	18	1	0
NC & ≥10	9	37	17	1	0

1094

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	3	2	+	0
<20 & OR <5	+	6	6	+	0
VSBY ≥5	5	51	41	1	0
≥50 & ≥5	4	43	33	1	0
NC & ≥10	4	41	31	1	0

507

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	+	0
<20 & OR <5	0	6	8	1	0
VSBY ≥5	8	43	46	2	0
≥50 & ≥5	8	36	35	1	0
NC & ≥10	8	35	34	1	0

566

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	7	0	0
<20 & OR <5	0	6	20	2	0
VSBY ≥5	0	22	70	6	0
≥50 & ≥5	0	14	47	4	0
NC & ≥10	0	14	45	3	0

187

WIND

LCC - VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wi

V

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
.5	+	0	0	0	0
<2	+	+	+	+	+
<2	+	0	+	+	+
<2	+	+	+	+	+
<5	+	2	5	1	+
≥5	8	42	43	6	+
≥5	7	33	32	4	+
10	7	30	29	3	+

4156

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	3	+	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	1	5	1	0
<20 & OR <5	1	4	12	4	+
VSBY ≥5	4	31	48	10	+
≥50 & ≥5	3	24	32	6	+
NC & ≥10	3	22	28	5	0

1166

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	2	4	2	+
<6 & OR <2	5	5	10	4	+
VSBY <2	3	3	7	2	+
<10 & OR <2	5	6	14	5	+
<20 & OR <5	6	14	23	9	1
VSBY ≥5	8	26	30	11	+
≥50 & ≥5	4	14	11	2	0
NC & ≥10	3	11	8	2	0

510

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	5	9	5	1
<6 & OR <2	+	8	17	8	1
VSBY <2	+	6	13	7	1
<10 & OR <2	+	11	28	13	2
<20 & OR <5	1	17	39	18	2
VSBY ≥5	1	15	30	7	1
≥50 & ≥5	+	4	8	2	0
NC & ≥10	+	3	7	1	0

735

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	4	10	6	2	+
<6 & OR <2	5	12	9	2	+
VSBY <2	4	11	7	2	+
<10 & OR <2	5	15	12	3	+
<20 & OR <5	8	25	19	5	+
VSBY ≥5	7	29	18	3	+
≥50 & ≥5	3	12	8	2	+
NC & ≥10	2	8	5	1	+

1432

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	6	6	1	+
<6 & OR <2	3	7	9	2	+
VSBY <2	2	6	7	1	+
<10 & OR <2	3	10	11	2	+
<20 & OR <5	6	15	15	3	+
VSBY ≥5	14	31	24	4	+
≥50 & ≥5	7	16	12	2	+
NC & ≥10	5	13	10	1	0

1311

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	8	11	2	+
<6 & OR <2	3	11	14	3	+
VSBY <2	2	10	12	2	+
<10 & OR <2	3	13	18	3	+
<20 & OR <5	4	22	28	6	+
VSBY ≥5	5	25	24	5	0
≥50 & ≥5	2	7	4	1	0
NC & ≥10	1	4	3	+	0

961

9

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
.5	1	4	4	1	0
<2	2	6	5	1	0
<2	1	4	4	1	0
<2	2	8	7	2	0
<5	3	13	15	3	+
≥5	12	34	32	4	0
≥5	8	19	14	0	0
10	7	15	10	0	0

504

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	12	14	2	+
<6 & OR <2	3	17	21	4	1
VSBY <2	3	13	15	3	1
<10 & OR <2	3	23	26	5	1
<20 & OR <5	5	33	36	7	1
VSBY ≥5	3	24	23	4	+
≥50 & ≥5	1	5	4	1	0
NC & ≥10	+	3	3	+	0

1365

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	16	15	4	+
<6 & OR <2	2	19	19	6	1
VSBY <2	2	16	16	4	+
<10 & OR <2	3	23	27	8	1
<20 & OR <5	4	32	37	10	1
VSBY ≥5	2	19	22	4	+
≥50 & ≥5	1	4	4	1	+
NC & ≥10	+	3	3	+	+

2426

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	9	12	4	+
<6 & OR <2	2	12	17	7	1
VSBY <2	1	9	12	5	1
<10 & OR <2	2	17	25	10	1
<20 & OR <5	4	25	37	13	1
VSBY ≥5	4	20	27	7	1
≥50 & ≥5	1	4	5	1	+
NC & ≥10	+	3	4	+	0

2136

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	8	12	3	1
<6 & OR <2	2	11	17	5	1
VSBY <2	1	8	13	4	1
<10 & OR <2	2	15	26	8	1
<20 & OR <5	3	24	39	12	1
VSBY ≥5	2	19	29	7	1
≥50 & ≥5	1	3	6	1	+
NC & ≥10	1	2	4	+	+

1873

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	4	1	+
<6 & OR <2	1	6	8	3	+
VSBY <2	1	3	4	1	+
<10 & OR <2	2	11	15	5	+
<20 & OR <5	4	21	32	9	+
VSBY ≥5	5	28	40	8	+
≥50 & ≥5	2	8	10	1	+
NC & ≥10	1	6	8	1	+

2310

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	+	+	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	1	1	1	0
<20 & OR <5	1	5	4	2	0
VSBY ≥5	4	46	42	4	0
≥50 & ≥5	3	38	35	3	0
NC & ≥10	2	22	20	1	0

616

19

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
.5	+	+	1	+	0
<2	+	2	2	+	0
<2	+	1	1	+	0
<2	1	6	7	1	0
<5	2	18	21	4	+
≥5	5	38	46	7	+
≥5	2	14	14	2	+
10	2	13	13	2	+

1391

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	2	+	0
<6 & OR <2	+	3	3	+	+
VSBY <2	+	3	2	0	+
<10 & OR <2	1	5	6	1	+
<20 & OR <5	2	10	10	3	+
VSBY ≥5	11	41	32	5	0
≥50 & ≥5	9	34	23	2	0
NC & ≥10	7	27	18	2	0

614

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	3	6	2	1
<20 & OR <5	1	7	13	5	1
VSBY ≥5	5	32	47	11	1
≥50 & ≥5	4	24	30	6	+
NC & ≥10	3	21	27	5	+

3262

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	5	2	1
<20 & OR <5	1	6	12	3	1
VSBY ≥5	7	38	45	7	1
≥50 & ≥5	6	31	31	4	+
NC & ≥10	6	29	26	3	+

1595

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	0	0	0	0	+
<10 & OR <2	1	5	7	2	+
<20 & OR <5	1	9	13	4	+
VSBY ≥5	7	38	46	7	+
≥50 & ≥5	6	28	30	3	+
NC & ≥10	5	26	28	3	+

1170

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	1	2	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	3	5	1	+
<20 & OR <5	1	8	11	1	+
VSBY ≥5	10	41	44	3	+
≥50 & ≥5	9	32	31	2	+
NC & ≥10	8	32	30	2	+

1132

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	2	+	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	6	1	0
<20 & OR <5	1	10	12	1	0
VSBY ≥5	12	46	39	2	0
≥50 & ≥5	10	34	23	1	0
NC & ≥10	10	33	22	+	0

1254

29

WIND SPEED (KNOTS)

K	0-3	4-10	11-21	22-33	≥34
5	0	+	+	+	1
2	+	1	1	1	1
2	+	+	+	+	1
2	+	2	3	3	2
5	1	5	7	5	2
5	7	40	37	8	1
5	7	34	30	4	+
5	5	30	26	3	+

2662

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	1	3	1	0
<20 & OR <5	1	4	7	1	0
VSBY ≥5	8	42	46	2	0
≥50 & ≥5	7	37	37	1	0
NC & ≥10	7	35	34	1	0

1281

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	1	3	1	0
<20 & OR <5	0	3	9	1	0
VSBY ≥5	1	23	71	5	0
≥50 & ≥5	1	19	57	3	0
NC & ≥10	1	17	54	3	0

1636

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	1	5	1	+
<20 & OR <5	+	3	17	2	+
VSBY ≥5	1	22	71	5	+
≥50 & ≥5	1	17	47	3	+
NC & ≥10	1	17	45	2	+

4148

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	4	+	0
<20 & OR <5	1	5	15	1	0
VSBY ≥5	4	31	61	3	0
≥50 & ≥5	3	20	28	1	0
NC & ≥10	3	18	25	1	0

1669

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	3	1	+
VSBY <2	+	+	1	+	+
<10 & OR <2	+	4	9	3	+
≤20 & OR <5	1	7	19	6	+
VSBY ≥5	6	28	45	12	+
≥50 & ≥5	5	21	27	7	+
NC & ≥10	4	18	21	5	+

5482

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	2	1
VSBY <2	+	+	1	1	1
<10 & OR <2	1	4	7	4	1
<20 & OR <5	1	8	15	7	2
VSBY ≥5	8	37	34	9	1
≥50 & ≥5	6	28	22	4	+
NC & ≥10	6	24	17	3	+

6335

39

WIND SPEED (KNOTS)

IND	0-3	4-10	11-21	22-33	≥34
	0	0	0	0	0
	0	1	1	+	0
	0	0	+	+	0
	0	3	2	+	0
	+	6	6	+	0
	5	51	41	1	0
	4	43	33	1	0
	4	41	31	1	0

507

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	4	+	0
<20 & OR <5	0	6	8	1	0
VSBY ≥5	8	43	46	2	0
≥50 & ≥5	8	36	35	1	0
NC & ≥10	8	35	34	1	0

566

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	0	0	0
<6 & OR <2	0	1	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	2	7	0	0
<20 & OR <5	0	6	20	2	0
VSBY ≥5	0	22	70	6	0
≥50 & ≥5	0	14	47	4	0
NC & ≥10	0	14	45	3	0

187

42

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	0	0
<6 & OR <2	0	2	4	+	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	8	15	1	+
<20 & OR <5	+	17	33	3	+
VSBY ≥5	2	36	56	4	+
≥50 & ≥5	1	13	14	1	+
NC & ≥10	1	12	11	1	0

705

43

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	1	2	+	+
VSBY <2	0	0	0	+	0
<10 & OR <2	1	4	4	1	+
<20 & OR <5	1	11	8	1	+
VSBY ≥5	13	59	24	1	0
≥50 & ≥5	12	46	16	+	0
NC & ≥10	11	45	15	+	0

824

44

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	1	4	5	1	+
<20 & OR <5	1	11	11	1	+
VSBY ≥5	9	50	35	2	0
≥50 & ≥5	8	37	23	1	0
NC & ≥10	7	33	20	+	0

2398

45

WIND SPEED (KNOTS)

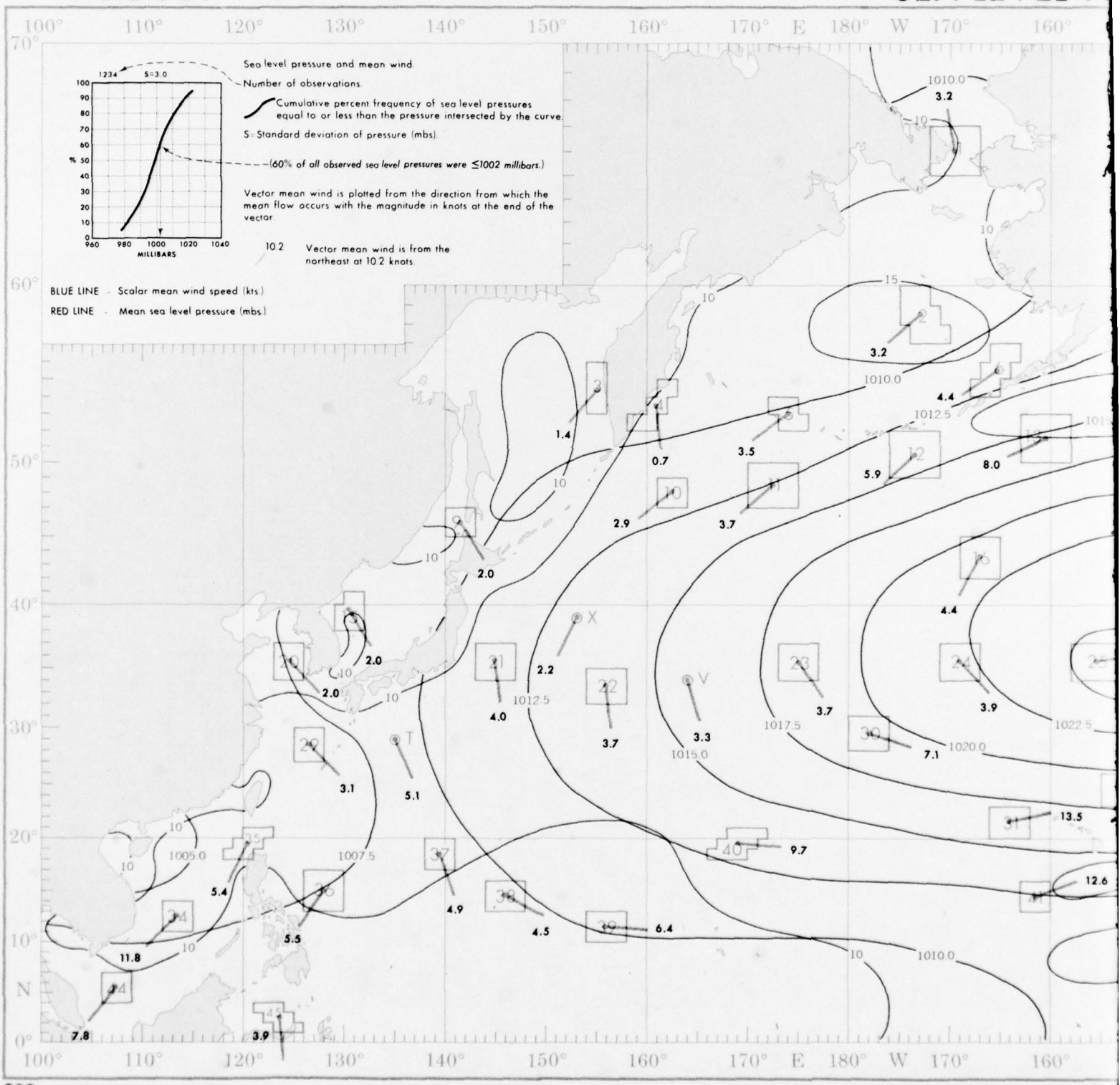
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	2	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	2	12	5	0	0
<20 & OR <5	2	14	7	0	0
VSBY ≥5	12	63	19	0	0
≥50 & ≥5	9	49	16	0	0
NC & ≥10	9	49	16	0	0

43

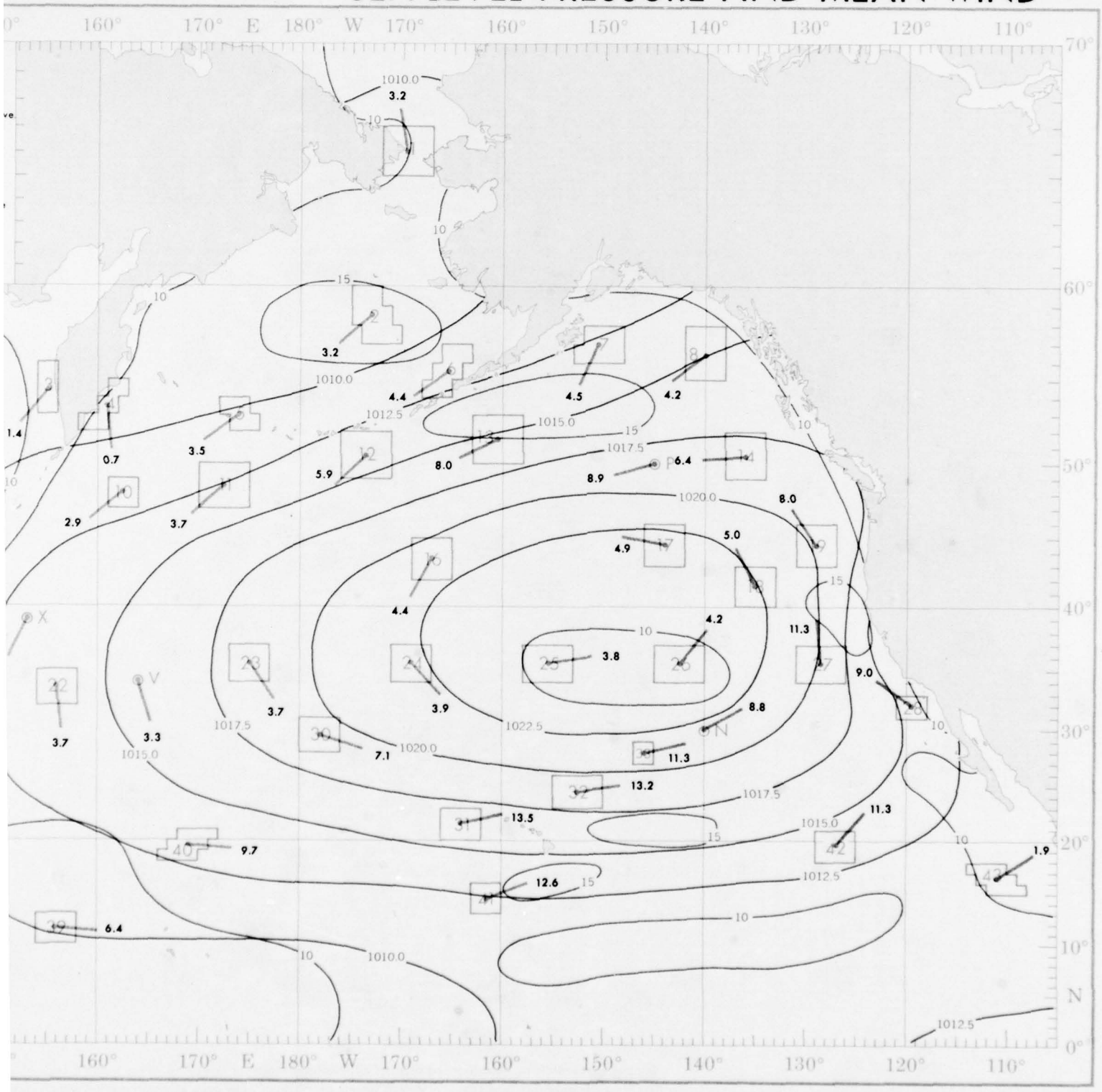
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST

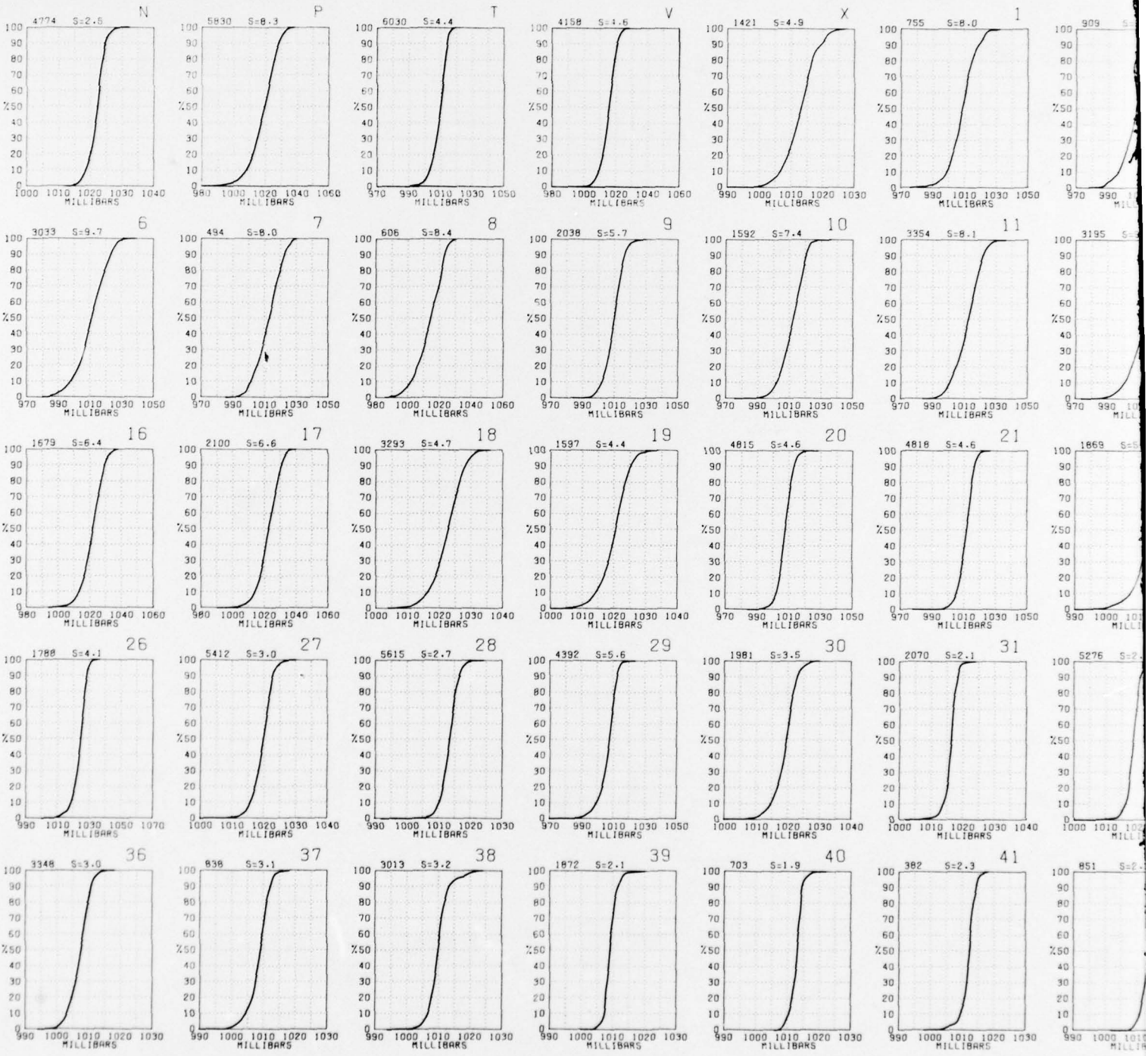
SEA LEVEL P



SEA LEVEL PRESSURE AND MEAN WIND

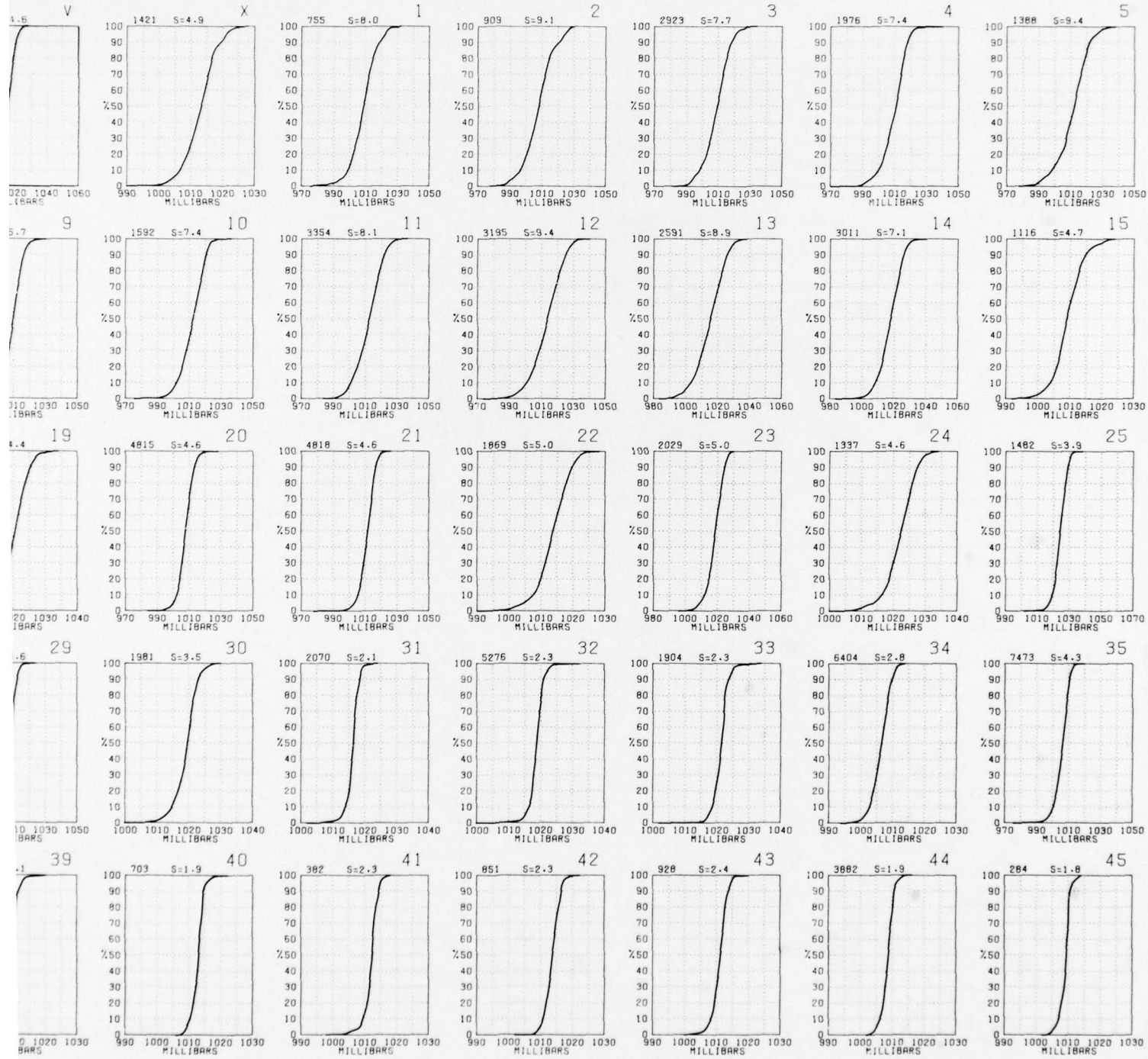


SEA LEVEL PRESSURE



Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wher

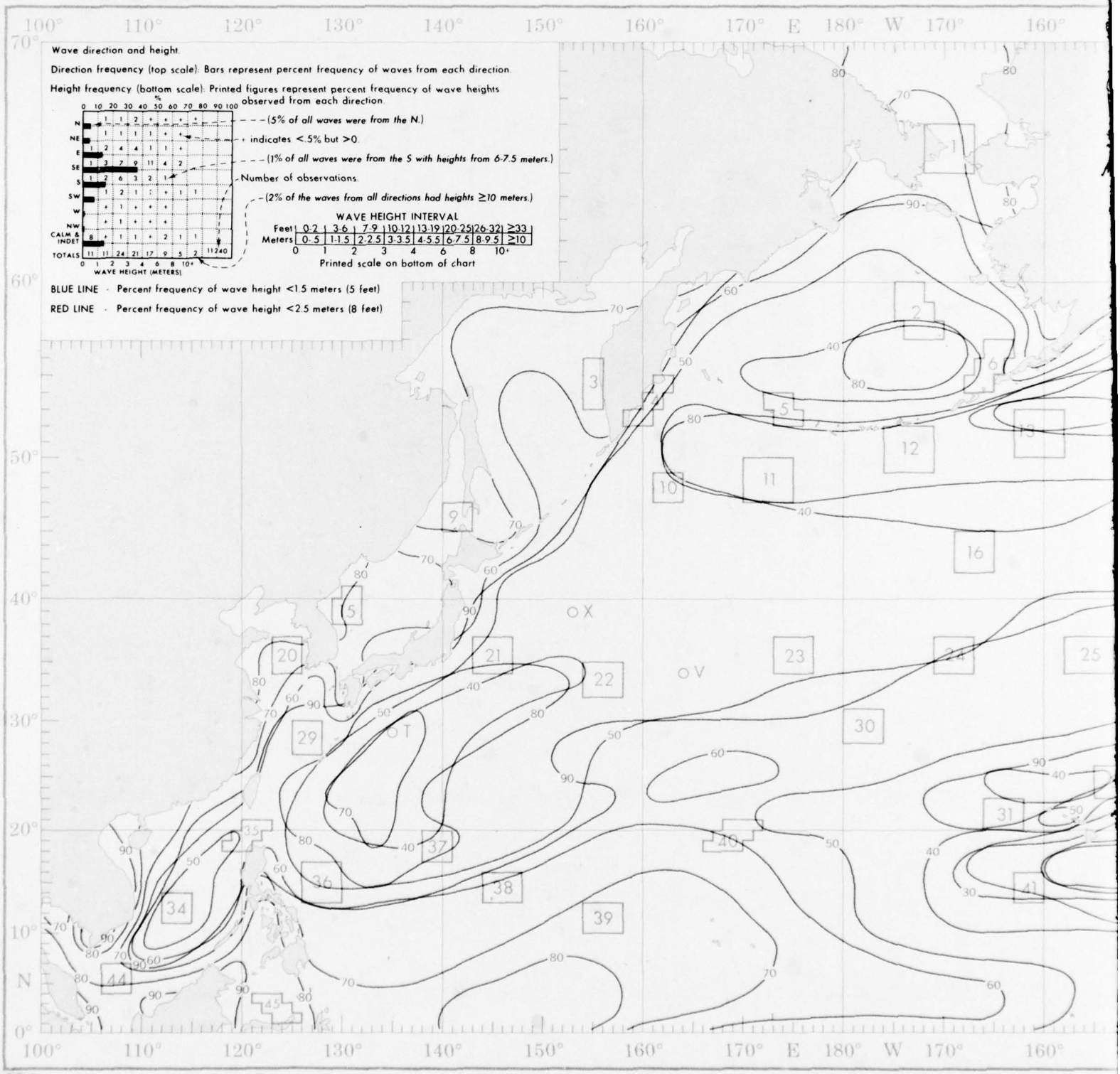
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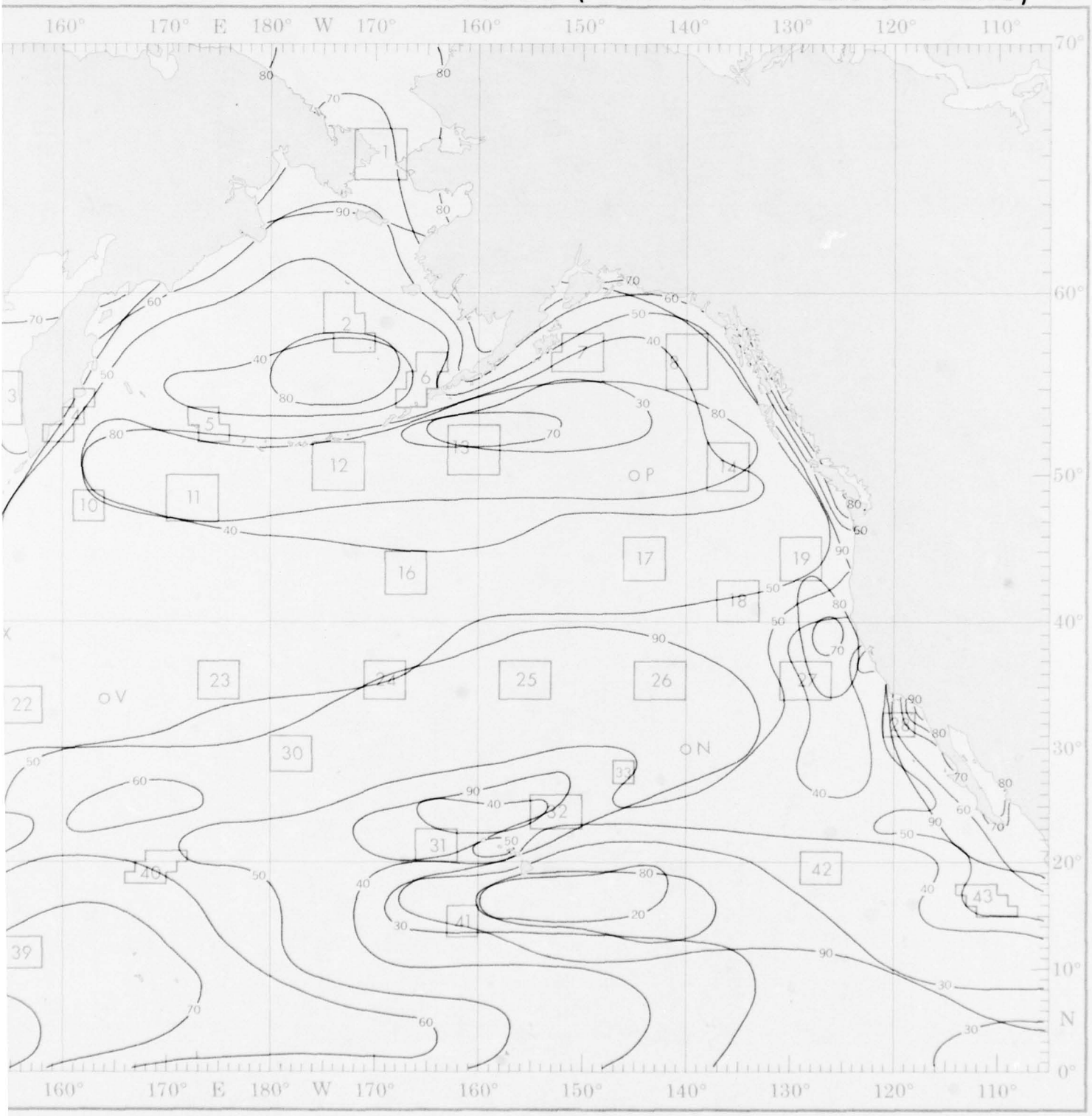
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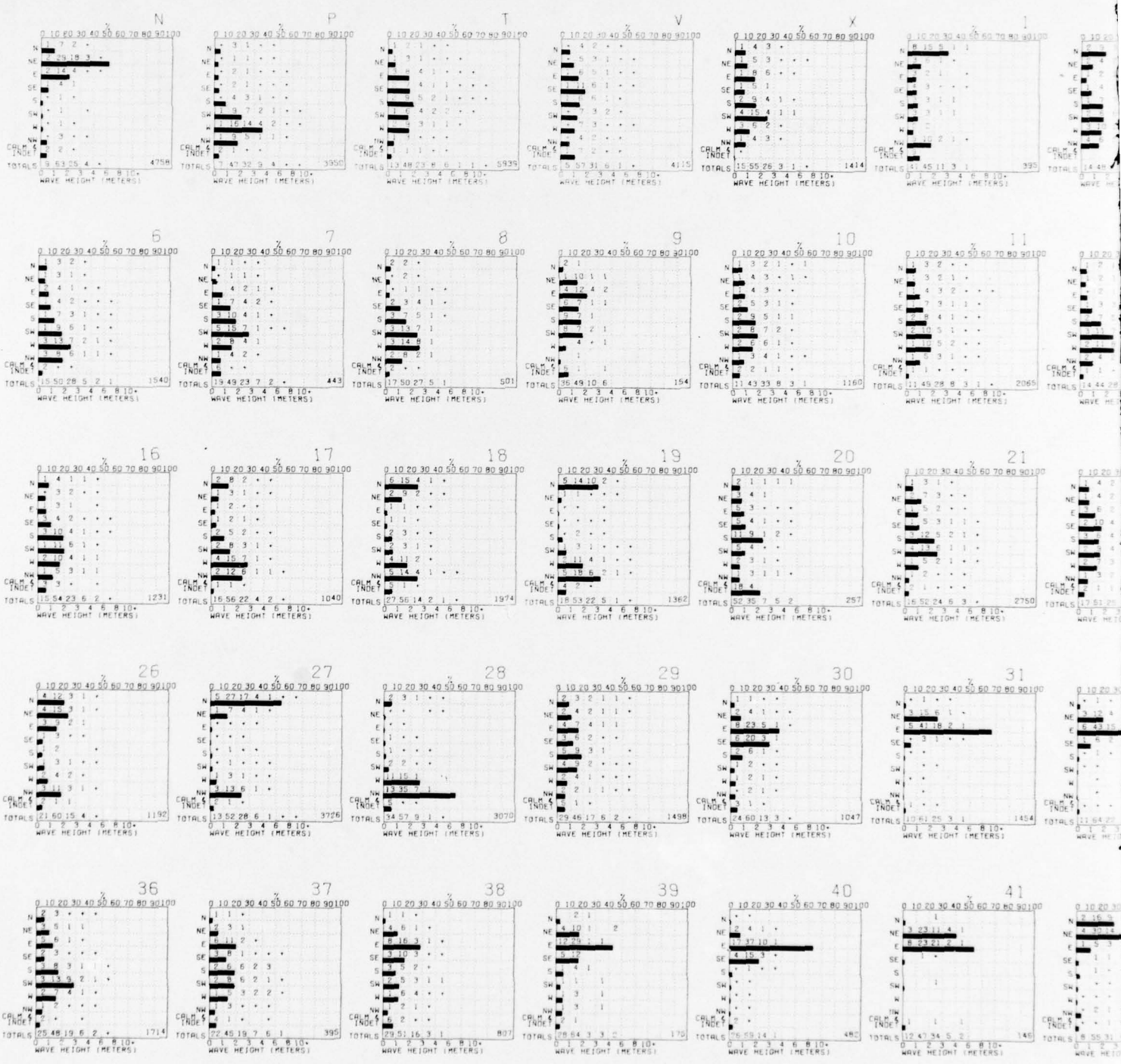
WAVES



WAVES (<1.5 AND <2.5 METERS)



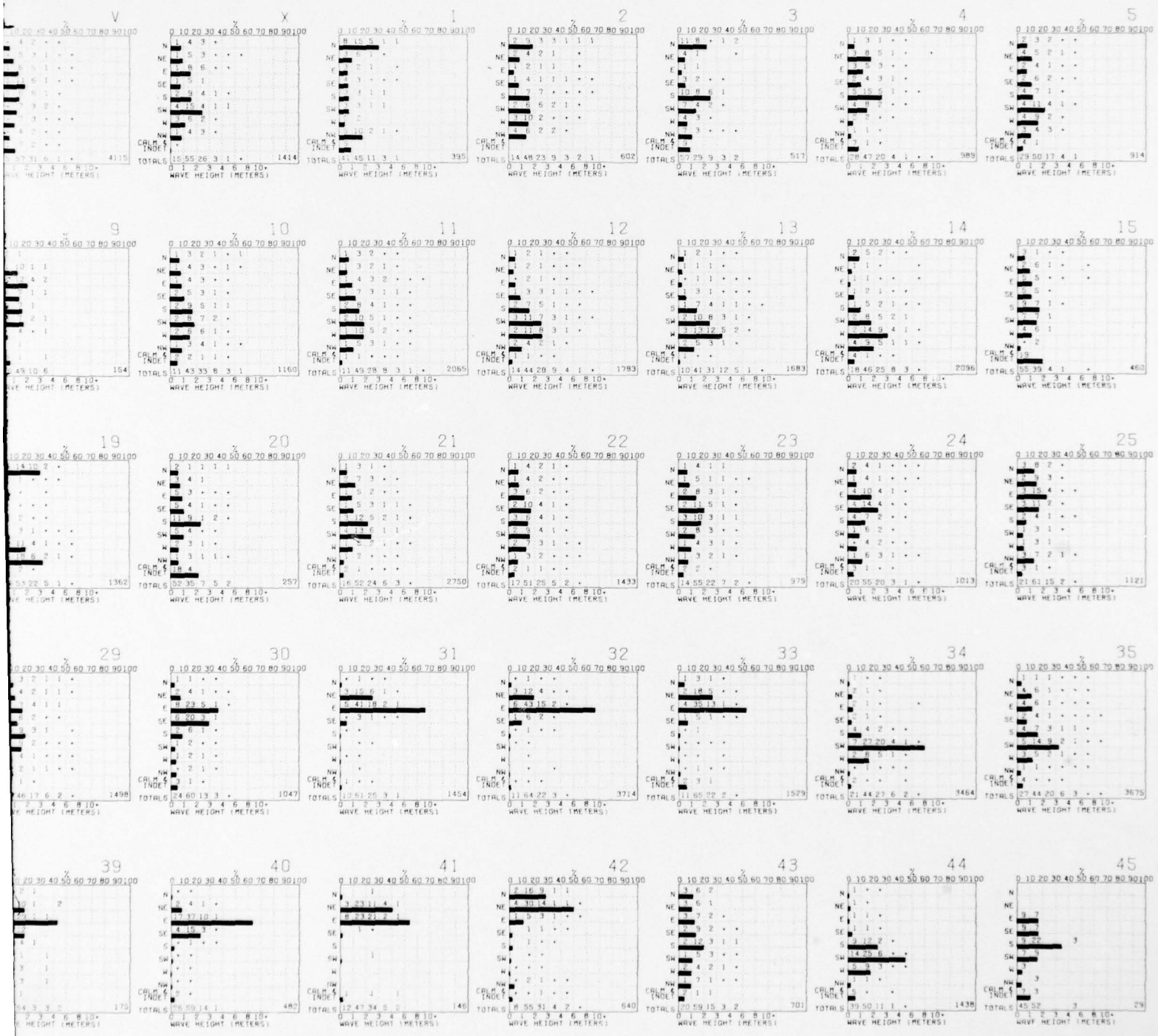
WAVE DIRECTION AND HEIGHT



Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

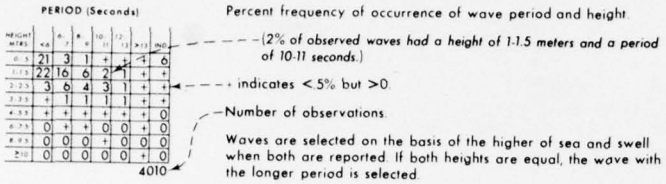
EIGHT

AUGUST



nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

AUGUST



Percent frequency of occurrence of wave period and height.

(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)

+ indicates < 5% but >0.

Number of observations.

Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.

BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)

RED LINE - Percent frequency of wave height ≥6 meters (20 feet)

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	1	+	0	0	2
1-1.5	17	28	12	3	+	0	2
2-2.5	2	16	6	1	+	+	+
3-3.5	0	2	1	+	+	0	0
4-5.5	0	+	0	+	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4773

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	2
1-1.5	15	18	7	3	2	+	1
2-2.5	3	17	8	3	1	0	+
3-3.5	+	4	3	1	+	+	+
4-5.5	+	1	2	1	+	0	0
6-7.5	0	+	+	+	+	0	0
8-9.5	0	+	0	0	+	0	0
≥10	0	0	0	0	0	0	0

3976

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	3	3	+	0	0	6
1-1.5	2	8	18	2	+	0	17
2-2.5	1	2	9	5	+	+	5
3-3.5	+	+	3	3	1	+	1
4-5.5	+	1	2	2	1	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	+	+	0	0

6018

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	1	+	0	0	1
1-1.5	12	22	12	2	1	+	7
2-2.5	3	14	12	1	+	+	2
3-3.5	+	2	3	+	+	+	+
4-5.5	0	1	1	+	0	0	+
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4117

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	6	4	+	0	0	4
1-1.5	+	14	20	+	2	+	18
2-2.5	0	2	13	1	+	1	7
3-3.5	0	+	1	+	1	0	1
4-5.5	0	+	1	0	+	0	+
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1417

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	29	1	+	0	0	0	14
1-1.5	26	7	1	1	1	0	6
2-2.5	4	3	1	+	0	0	1
3-3.5	+	1	1	0	0	0	1
4-5.5	+	+	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

426

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	+	+	0	0	3
1-1.5	29	15	3	+	+	+	+
2-2.5	7	10	8	1	+	+	+
3-3.5	+	1	2	1	+	+	+
4-5.5	0	+	1	1	1	+	+
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1579

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	+	0	0	0	8
1-1.5	23	14	5	1	2	+	3
2-2.5	5	9	3	3	1	1	1
3-3.5	1	3	1	1	+	+	+
4-5.5	+	+	1	+	0	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

455

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	2	+	+	0	0	2
1-1.5	24	14	8	1	1	+	+
2-2.5	5	13	5	1	1	1	1
3-3.5	1	2	1	0	+	1	0
4-5.5	0	0	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

508

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	1	0	0	0	0	28
1-1.5	21	3	2	0	0	0	17
2-2.5	3	3	1	0	0	0	2
3-3.5	1	1	2	0	0	1	1
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

174

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	11	22	7	1	1	0	2
2-2.5	2	14	11	4	1	+	1
3-3.5	+	2	4	+	+	+	1
4-5.5	+	1	1	+	0	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1171

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	2
1-1.5	18	22	5	1	1	0	1
2-2.5	3	10	10	2	1	+	+
3-3.5	1	3	2	2	1	+	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

2108

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	2	1	+	0	0	4
1-1.5	20	22	5	1	+	0	3
2-2.5	3	10	7	2	+	0	1
3-3.5	+	2	3	+	0	0	+
4-5.5	0	1	1	+	+	+	+
6-7.5	0	+	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1267

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	14	1	1	+	0	0	2
1-1.5	23	24	5	1	1	+	+
2-2.5	4	8	6	2	+	+	+
3-3.5	+	1	1	1	+	+	0
4-5.5	+	+	1	+	+	0	0
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1073

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	3	+	0	0	6
1-1.5	28	19	5	1	1	+	1
2-2.5	3	4	4	2	+	+	+
3-3.5	+	+	1	+	+	+	0
4-5.5	+	+	+	+	0	+	0
6-7.5	0	0	0	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2014

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	4	+	+	0	0	5
1-1.5	28	14	5	2	+	+	3
2-2.5	7	9	4	1	0	1	+
3-3.5	1	2	2	+	+	1	+
4-5.5	+	+	+	+	0	+	0
6-7.5	0	+	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1380

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	30	5	1	+	0	0	19
1-1.5	19	6	3	0	0	0	4
2-2.5	1	2	2	1	+	0	0
3-3.5	+	2	3	0	0	0	0
4-5.5	0	1	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

279

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	2	2	+	0	0	2
1-1.5	22	18	8	1	+	+	1
2-2.5	4	8	7	3	1	+	1
3-3.5	1	1	1	1	1	+	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	+	0	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2830

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	1	+	0	0	3
1-1.5	28	19	6	1	1	+	3
2-2.5	2	6	4	1	+	0	1
3-3.5	1	1	1	1	+	0	0
4-5.5	+	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1229

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	2	1	+	0	0	2
1-1.5	21	17	8	1	1	+	1
2-2.5	5	10	7	3	1	+	1
3-3.5	1	2	2	1	+	+	+
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	+	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

3830

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	24	4	1	1	0	0	5
1-1.5	34	15	5	1	+	+	1
2-2.5	3	3	1	1	+	0	+
3-3.5	+	+	+	+	+	0	+
4-5.5	0	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3121

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	24	2	1	+	0	0	5
1-1.5	22	15	5	1	+	+	1
2-2.5	2	7	5	2	+	+	+
3-3.5	+	1	2	2	+	+	0
4-5.5	+	1	1	+	+	+	+
6-7.5	0	+	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1571

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	18	2	2	+	0	0	5
1-1.5	27	18	9	2	1	+	1
2-2.5	2	3	4	1	1	+	+
3-3.5	1	1	1	+	+	0	0
4-5.5	0	0	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1086

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	+	+	1	0	0	1
1-1.5	33	17	7	2	1	+	1
2-2.5	6	10	6	2	+	+	+
3-3.5	+	1	2	+	+	+	0
4-5.5	0	1	0	+	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1468

36

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	21	2	1	1	0	0	3
1-1.5	22	18	4	1	1	+	1
2-2.5	3	6	6	1	1	+	+
3-3.5	1	1	2	1	1	+	+
4-5.5	+	1	+	+	+	0	0
6-7.5	0	+	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1774

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	0	+	0	0	4
1-1.5	19	14	5	2	1	+	2
2-2.5	3	6	7	2	1	+	+
3-3.5	0	1	3	2	+	+	0
4-5.5	+	+	4	1	+	+	0
6-7.5	0	0	0	0	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

405

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	22	3	1	+	0	0	6
1-1.5	21	17	6	3	1	+	2
2-2.5	2	5	6	2	+	+	+
3-3.5	+	1	+	1	+	0	+
4-5.5	+	+	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

847

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	26	1	1	0	0	0	3
1-1.5	31	18	10	2	1	0	1
2-2.5	2	1	1	0	0	0	0
3-3.5	0	1	2	0	0	0	0
4-5.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

180

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	3	1	+	0	0	2
1-1.5	22	22	8	1	1	+	3
2-2.5	3	6	3	+	1	1	+
3-3.5	1	+	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

502

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	7	0	0	0	0	2
1-1.5	20	20	3	2	0	0	0
2-2.5	5	16	9	1	1	0	1
3-3.5	0	2	0	3	1	0	0
4-5.5	0	1	0	0	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

147

Graphs represent the objective compilation of available data for specified areas without r
The isopleth analyses (opposite page) are based on all available data subjectively adjuste

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	1	+	0	0	1
.5-1	12	22	12	2	1	+	7
1-1.5	3	14	12	1	+	+	2
1.5-2	+	2	3	+	+	+	+
2-2.5	0	1	1	+	0	0	+
2.5-3	0	0	+	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							4117

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	6	4	+	0	0	4
.5-1	+	14	20	+	2	+	18
1-1.5	+	2	13	1	+	1	7
1.5-2	0	+	1	+	1	0	1
2-2.5	0	+	1	0	+	0	+
2.5-3	0	+	0	+	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1417

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	29	1	+	0	0	0	14
.5-1	26	7	1	1	1	0	6
1-1.5	4	3	1	+	0	0	1
1.5-2	+	1	1	0	0	0	1
2-2.5	+	+	0	+	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							426

2

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	6	+	+	0	0	+
.5-1	13	21	10	1	1	0	1
1-1.5	1	11	7	2	1	+	1
1.5-2	0	1	1	6	0	+	+
2-2.5	0	1	2	1	0	+	0
2.5-3	0	1	+	+	0	+	0
3-3.5	0	1	0	0	1	0	0
3.5-4	0	0	0	0	0	0	0
							605

3

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	41	5	0	0	0	0	17
.5-1	16	5	+	+	0	0	3
1-1.5	1	5	1	0	0	0	1
1.5-2	0	2	1	0	0	0	1
2-2.5	0	1	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							595

4

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	2	1	1	0	0	13
.5-1	20	11	4	1	1	+	8
1-1.5	4	6	3	2	+	0	3
1.5-2	1	1	2	+	+	0	+
2-2.5	+	+	+	+	+	+	+
2.5-3	0	0	+	0	0	0	0
3-3.5	0	0	+	0	0	0	0
3.5-4	0	0	+	0	0	0	0
							1027

5

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	17	2	2	0	0	0	10
.5-1	24	12	7	2	+	0	4
1-1.5	3	6	5	1	0	+	2
1.5-2	1	2	1	+	0	0	0
2-2.5	+	+	0	+	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							939

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	14	1	0	0	0	0	28
.5-1	21	3	2	0	0	0	17
1-1.5	3	3	1	0	0	0	2
1.5-2	1	1	2	0	0	1	1
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							174

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	+	+	0	0	2
.5-1	11	22	7	1	1	0	2
1-1.5	2	14	11	4	1	+	1
1.5-2	+	2	5	+	+	+	1
2-2.5	+	1	1	+	0	+	+
2.5-3	0	0	+	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1171

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	1	+	+	0	0	2
.5-1	18	22	5	1	1	0	1
1-1.5	3	10	10	2	1	+	+
1.5-2	1	3	2	2	1	+	+
2-2.5	+	2	1	+	+	+	+
2.5-3	+	1	1	+	0	+	+
3-3.5	0	0	+	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							2108

12

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	2	1	+	0	0	3
.5-1	17	18	5	2	+	+	2
1-1.5	4	11	8	4	+	+	+
1.5-2	+	3	2	1	1	+	+
2-2.5	+	1	1	+	+	+	+
2.5-3	0	0	+	+	0	+	0
3-3.5	0	+	0	+	0	0	0
3.5-4	0	0	0	0	0	0	0
							1824

13

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	1	+	0	0	1
.5-1	17	17	5	1	1	+	1
1-1.5	5	13	10	2	1	+	+
1.5-2	1	4	3	2	1	+	+
2-2.5	+	1	2	+	+	+	+
2.5-3	+	+	+	0	+	+	0
3-3.5	0	0	0	0	0	+	0
3.5-4	0	0	0	0	0	0	0
							1698

14

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	1	1	+	0	0	4
.5-1	21	16	4	1	+	+	2
1-1.5	5	11	6	2	1	+	+
1.5-2	1	3	2	1	+	+	+
2-2.5	+	1	1	+	+	0	+
2.5-3	0	0	+	0	+	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							2136

15

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	36	1	0	0	0	0	19
.5-1	34	5	0	0	0	0	+
1-1.5	2	2	+	0	0	0	+
1.5-2	0	+	+	+	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	+	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							465

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	4	+	+	0	0	5
.5-1	28	14	5	2	+	+	3
1-1.5	7	9	4	1	0	1	+
1.5-2	1	2	2	+	+	1	+
2-2.5	+	+	+	+	0	+	0
2.5-3	0	+	0	+	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1380

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	30	5	1	+	0	0	19
.5-1	19	6	3	0	0	0	4
1-1.5	1	2	2	1	+	0	0
1.5-2	+	2	3	0	0	0	0
2-2.5	+	1	0	0	+	0	0
2.5-3	0	0	+	0	0	0	0
3-3.5	0	+	0	+	0	0	0
3.5-4	0	0	0	0	0	0	0
							279

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	2	2	+	0	0	2
.5-1	22	18	8	1	+	+	1
1-1.5	4	8	7	3	1	+	1
1.5-2	+	1	2	1	1	+	+
2-2.5	+	1	1	1	+	+	+
2.5-3	0	+	0	0	+	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							2830

22

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	2	1	+	0	0	3
.5-1	21	16	9	1	1	+	2
1-1.5	4	8	7	3	1	+	1
1.5-2	+	1	2	1	1	+	+
2-2.5	+	1	+	0	+	+	+
2.5-3	0	0	0	0	+	0	0
3-3.5	0	0	0	0	0	+	0
3.5-4	0	0	0	0	0	0	0
							1468

23

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	2	+	1	0	0	3
.5-1	24	19	5	1	1	+	2
1-1.5	4	7	6	2	+	+	+
1.5-2	1	2	2	1	+	0	0
2-2.5	+	+	+	+	+	+	+
2.5-3	0	0	0	0	+	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1023

24

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	1	+	+	0	0	4
.5-1	26	17	5	2	1	+	3
1-1.5	3	8	5	2	+	+	+
1.5-2	+	1	1	1	+	0	+
2-2.5	+	+	+	+	0	0	0
2.5-3	0	+	+	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1041

25

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	17	2	1	1	0	0	3
.5-1	29	18	6	2	2	1	2
1-1.5	4	5	4	1	+	+	+
1.5-2	+	+	1	+	+	0	+
2-2.5	+	+	+	+	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1158

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	24	2	1	+	0	0	5
.5-1	22	15	5	1	+	+	1
1-1.5	2	7	5	2	+	+	+
1.5-2	+	1	2	2	+	+	0
2-2.5	+	1	1	+	+	+	+
2.5-3	0	+	0	0	+	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1571

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	18	2	2	+	0	0	5
.5-1	27	18	9	2	1	+	1
1-1.5	2	3	4	1	1	+	+
1.5-2	1	1	1	+	+	0	0
2-2.5	+	1	+	+	+	0	0
2.5-3	0	0	+	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1086

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	+	+	1	0	0	1
.5-1	33	17	7	2	1	+	1
1-1.5	6	10	6	2	+	+	+
1.5-2	+	1	2	+	+	+	0
2-2.5	0	1	0	+	0	+	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1468

32

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	1	+	+	0	0	1
.5-1	32	21	7	1	1	+	1
1-1.5	4	8	6	2	+	+	1
1.5-2	+	1	1	+	+	+	+
2-2.5	+	1	+	+	+	+	+
2.5-3	0	+	+	+	+	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							3762

33

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	+	+	0	0	2
.5-1	22	27	9	2	1	+	4
1-1.5	3	7	9	1	+	0	1
1.5-2	+	+	1	+	+	+	0
2-2.5	0	+	+	0	+	+	+
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1555

34

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	21	1	+	+	0	0	3
.5-1	20	16	4	+	+	+	+
1-1.5	4	10	9	3	1	+	+
1.5-2	+	2	2	1	+	+	+
2-2.5	+	+	1	+	+	+	+
2.5-3	0	+	+	+	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							3608

35

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	24	2	1	+	0	0	4
.5-1	21	16	4	1	+	+	1
1-1.5	3	8	5	3	+	+	+
1.5-2	+	1	2	1	+	+	+
2-2.5	+	1	1	1	+	+	0
2.5-3	0	+	+	+	+	+	+
3-3.5	0	0	0	+	0	0	0
3.5-4	0	0	0	0	0	0	0
							3854

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	1	0	0	0	3
.5-1	18	10	2	1	0	1	1
1-1.5	2	1	1	0	0	0	0
1.5-2	0	1	2	0	0	0	0
2-2.5	0	0	2	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							180

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	23	3	1	+	0	0	2
.5-1	22	22	8	1	1	+	3
1-1.5	3	6	3	+	1	1	+
1.5-2	+	+	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							502

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	7	0	0	0	0	2
.5-1	20	20	3	2	0	0	0
1-1.5	5	16	9	1	1	0	1
1.5-2	0	2	0	3	1	0	0
2-2.5	0	1	0	0	0	0	1
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							147

42

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	1	+	0	0	0	1
.5-1	25	21	5	1	1	+	1
1-1.5	5	13	7	2	1	1	1
1.5-2	1	1	1	+	+	0	+
2-2.5	+	1	1	+	0	0	+
2.5-3	0	0	0	0	+	+	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							650

43

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	19	2	+	+	0	0	3
.5-1	25	18	7	2	1	1	1
1-1.5	2	6	4	1	+	+	1
1.5-2	+	+	1	+	+	0	+
2-2.5	0	+	1	1	+	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							748

44

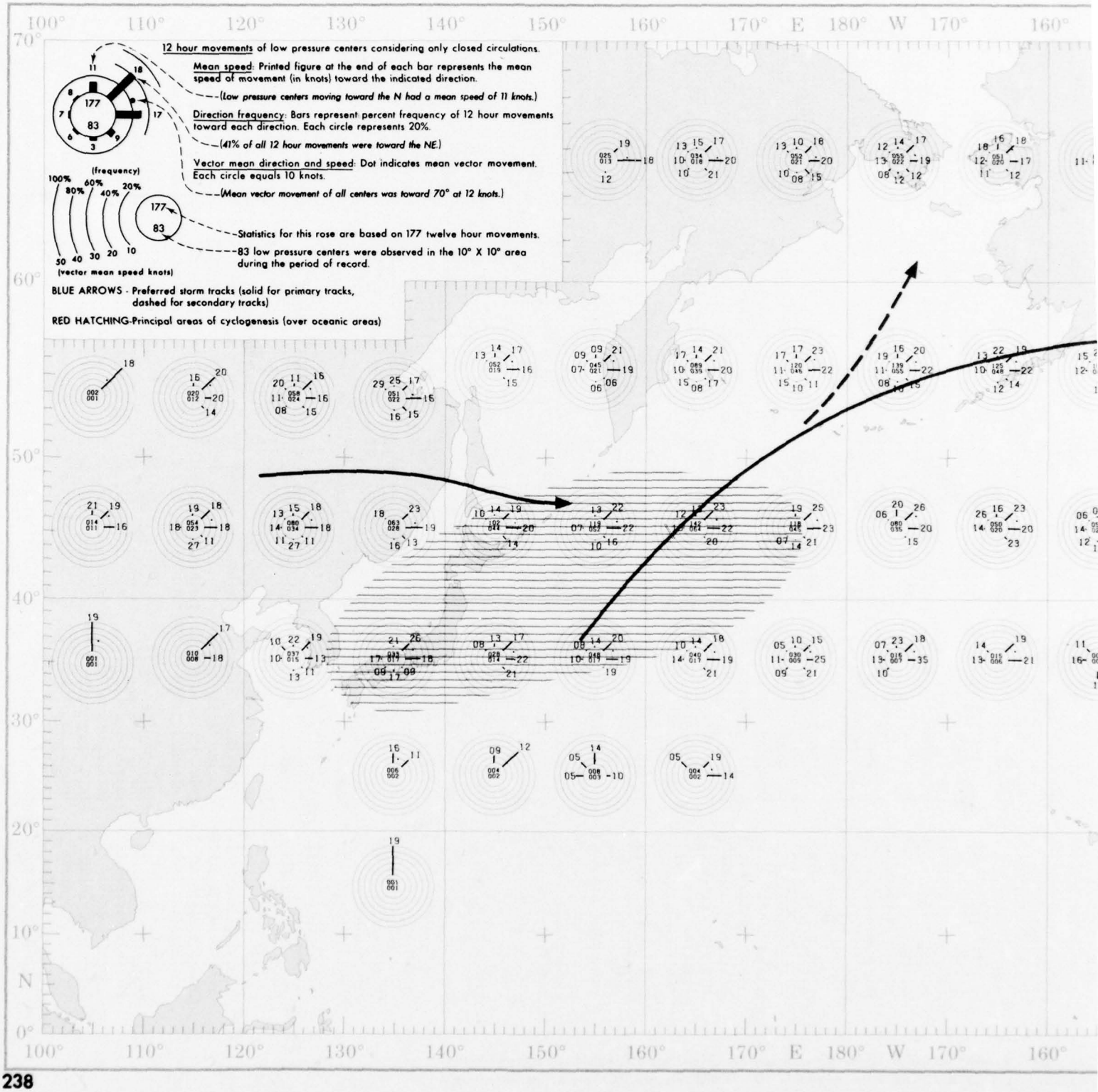
HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	33	2	+	0	0	0	8
.5-1	26	16	3	+	+	0	2
1-1.5	1	5	3	1	+	0	+
1.5-2	+	+	+	+	0	0	+
2-2.5	0	0	+	0	+	0	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							1543

45

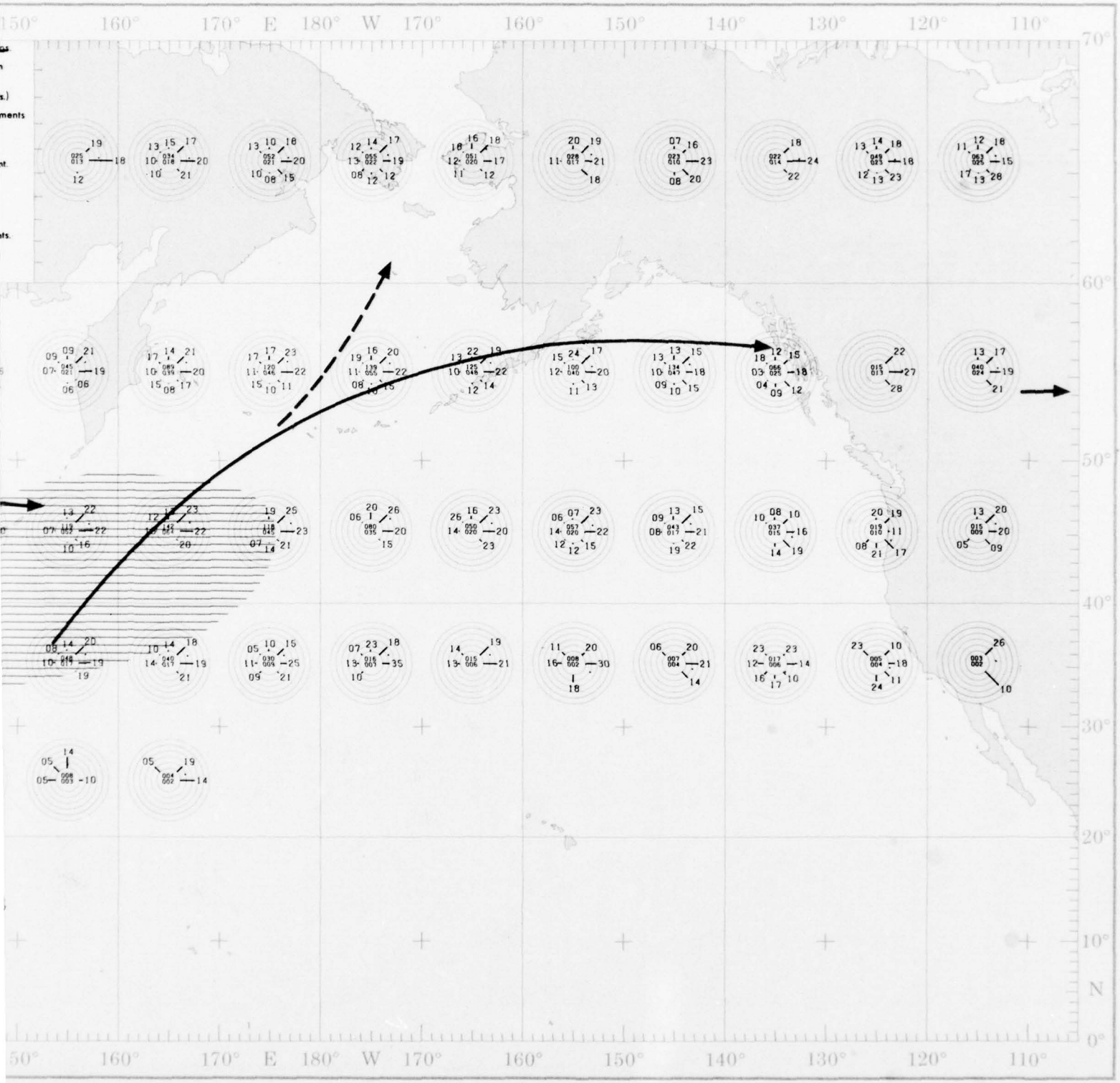
HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	41	3	0	0	0	0	6
.5-1	19	22	3	0	0	0	3
1-1.5	0	0	0	0	0	0	0
1.5-2	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	3	0
2.5-3	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
3.5-4	0	0	0	0	0	0	0
							32

ent the objective compilation of available data for specified areas without regard to suspected biases.
nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

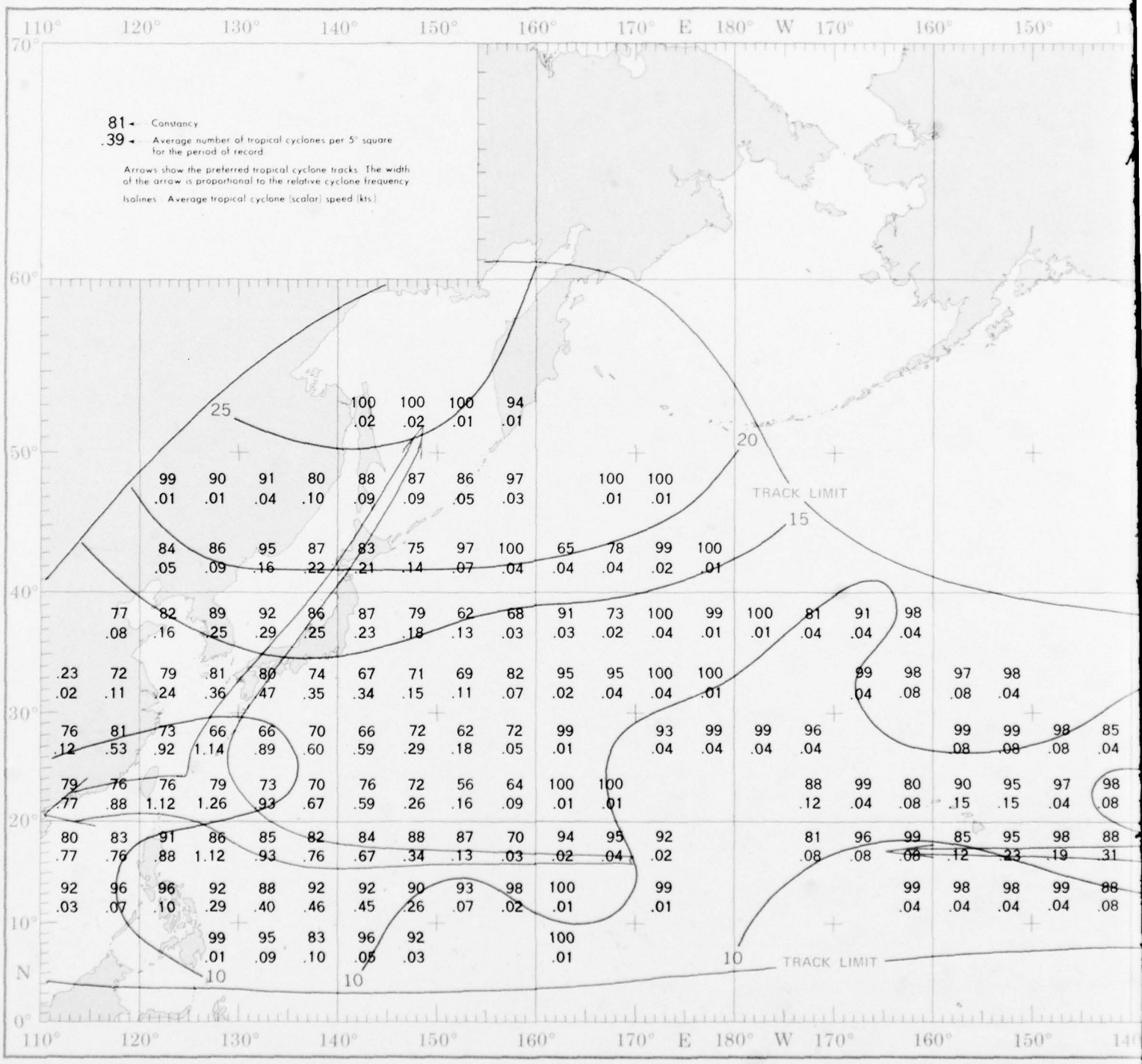
AUGUST

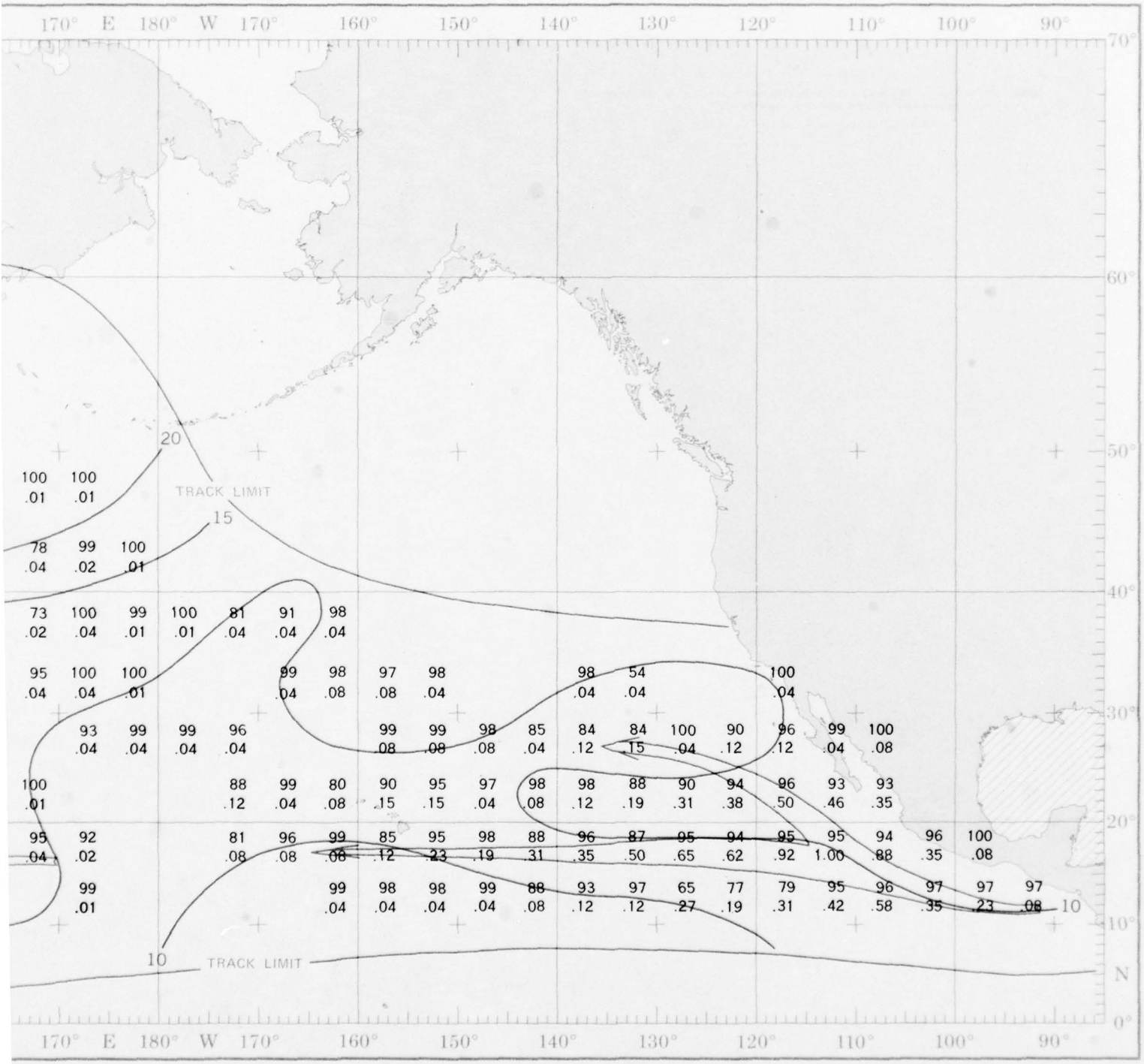

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
177
83
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

LOW PRESSURE CENTERS

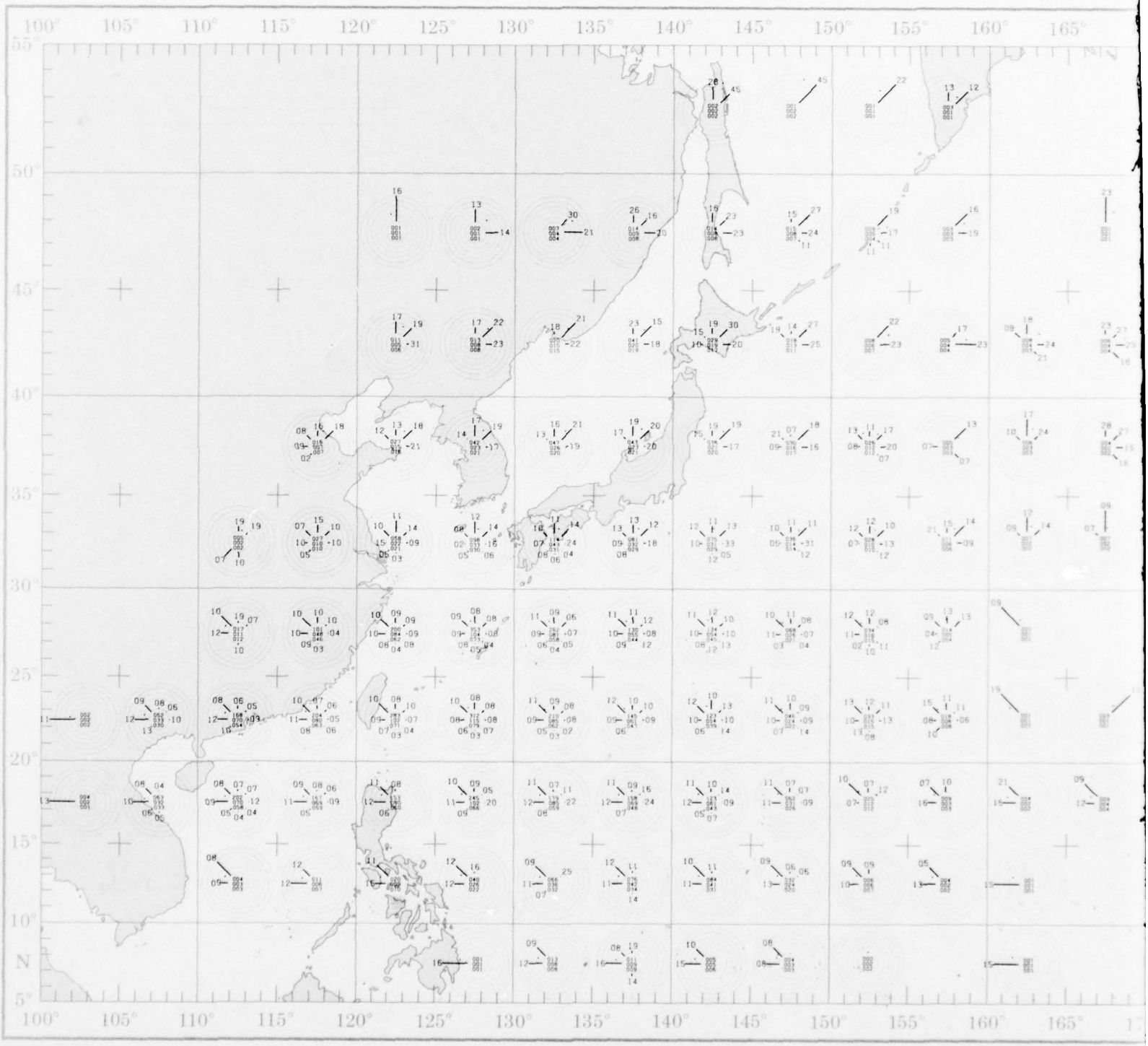


TROPICAL CYCLONE CHARACTERISTICS

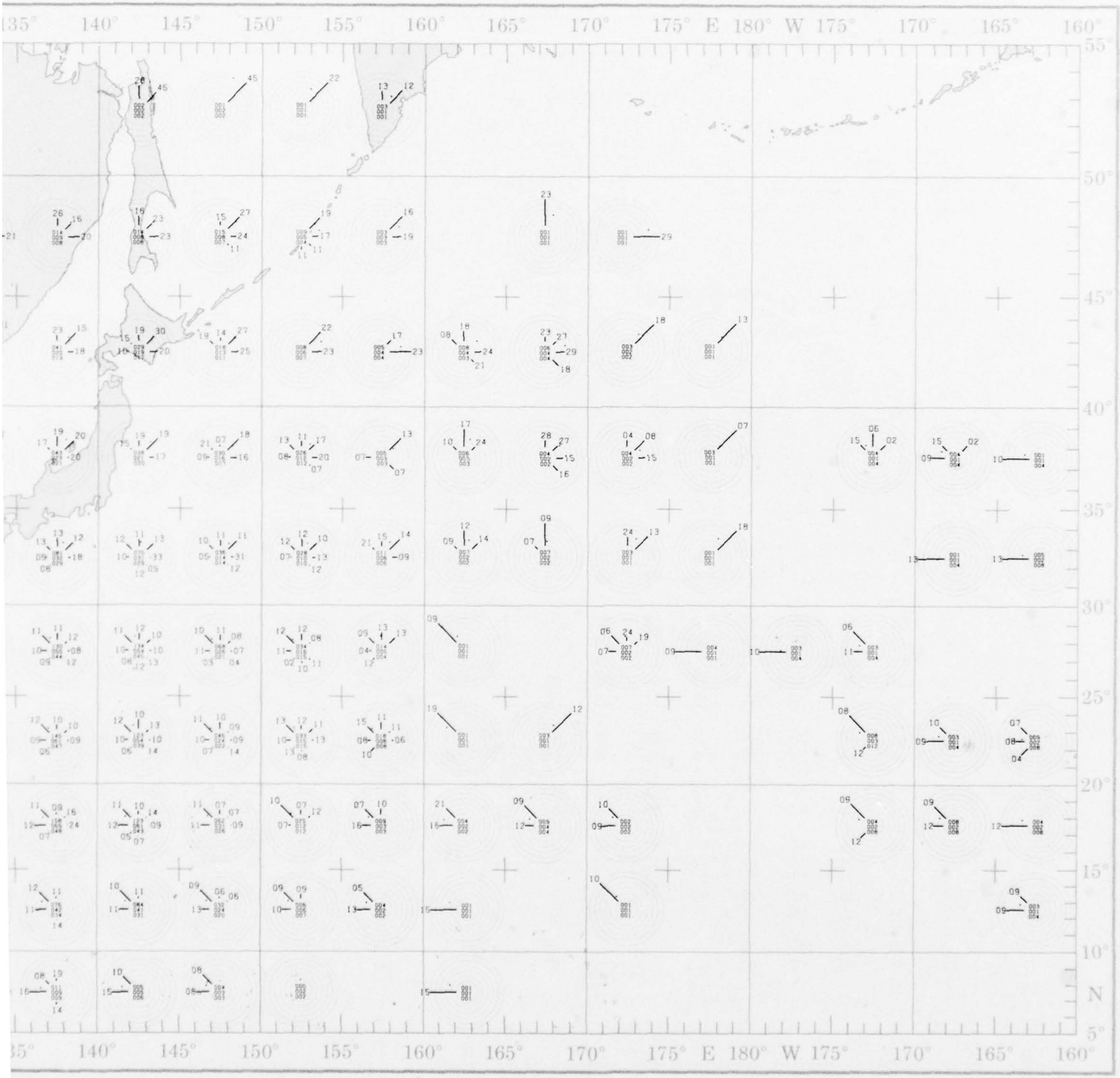



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
20
15
10
TRACK LIMIT
TRACK LIMIT
100 100
.01 .01
78 99 100
.04 .02 .01
73 100 99 100 81 91 98
.02 .04 .01 .01 .04 .04 .04
95 100 100 99 98 97 98 98 54 100
.04 .04 .01 .04 .08 .08 .04 .04 .04 .04
93 99 99 96 99 99 98 85 84 84 100 90 96 99 100
.04 .04 .04 .04 .08 .08 .08 .04 .12 .15 .04 .12 .12 .04 .08
100 88 99 80 90 95 97 98 98 88 90 94 96 93 93
.01 .12 .04 .08 .15 .15 .04 .08 .12 .19 .31 .38 .50 .46 .35
95 92 81 96 99 85 95 98 88 96 87 95 94 95 95 94 96 100
.04 .02 .08 .08 .08 .12 .23 .19 .31 .35 .50 .65 .62 .92 1.00 .88 .35 .08
99 99 98 98 99 88 93 97 65 77 79 95 96 97 97 97
.01 .04 .04 .04 .04 .08 .12 .12 .27 .19 .31 .42 .58 .35 .23 .08 10

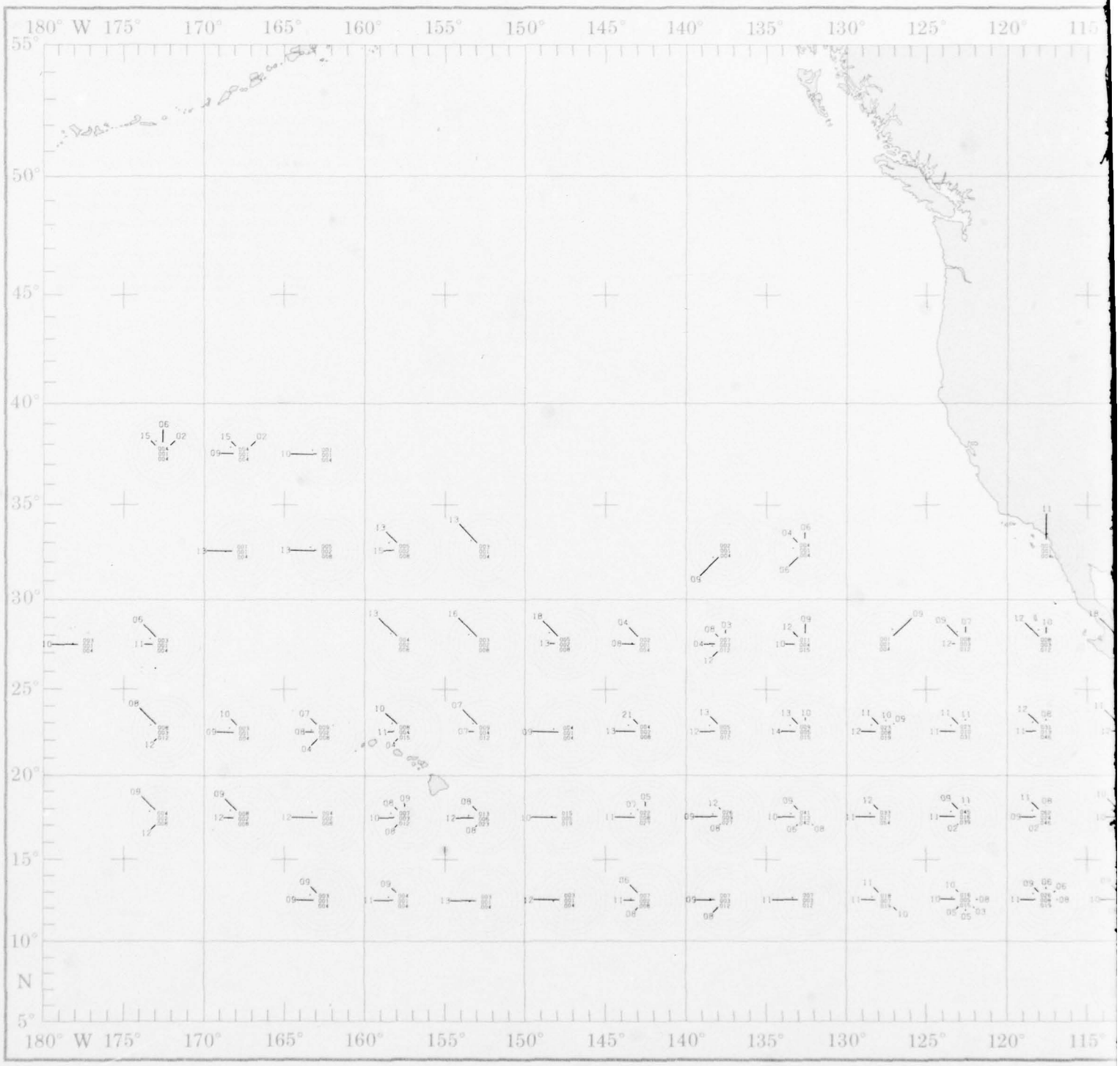
AUGUST


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

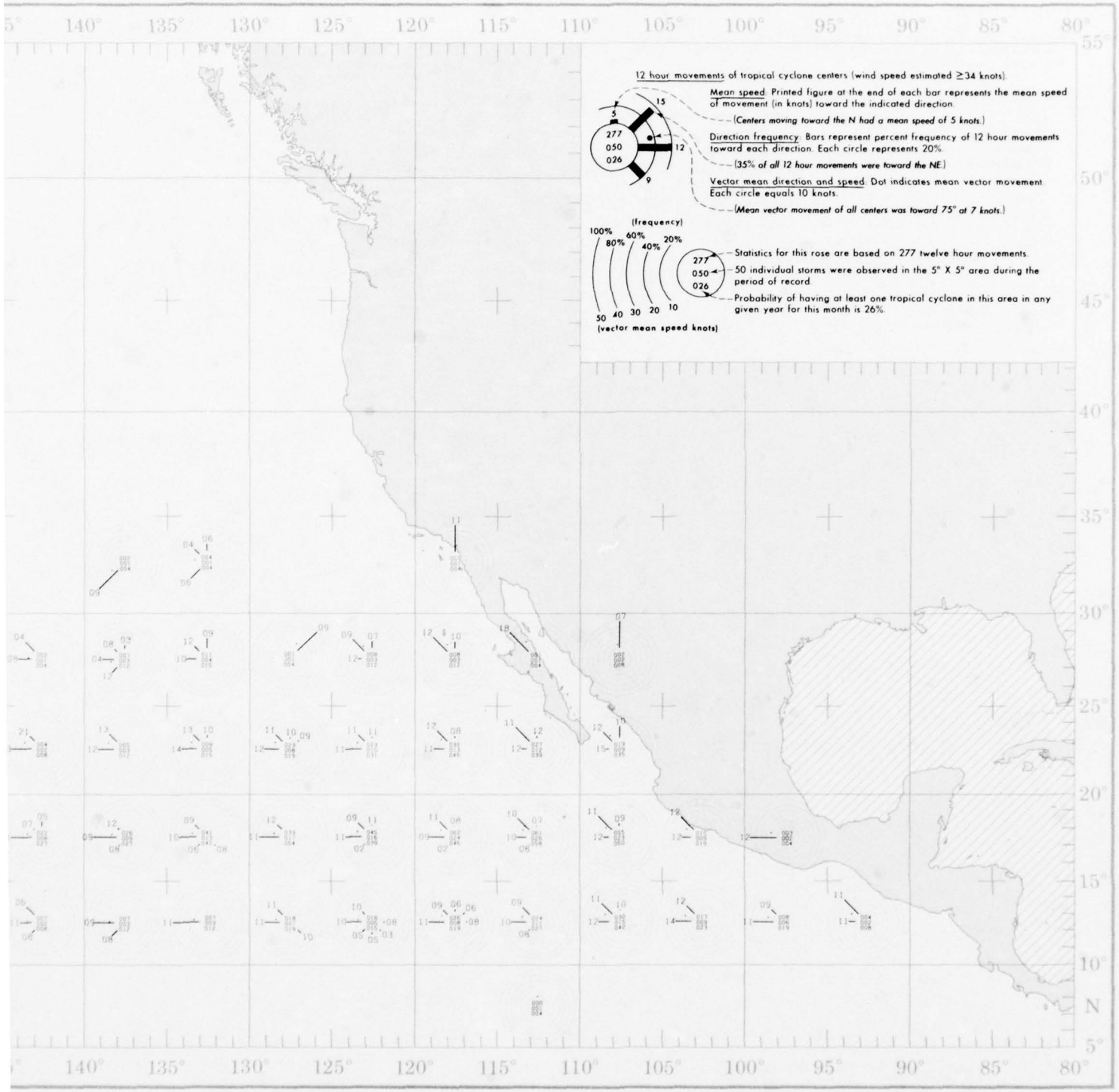
TROPICAL CYCLONE



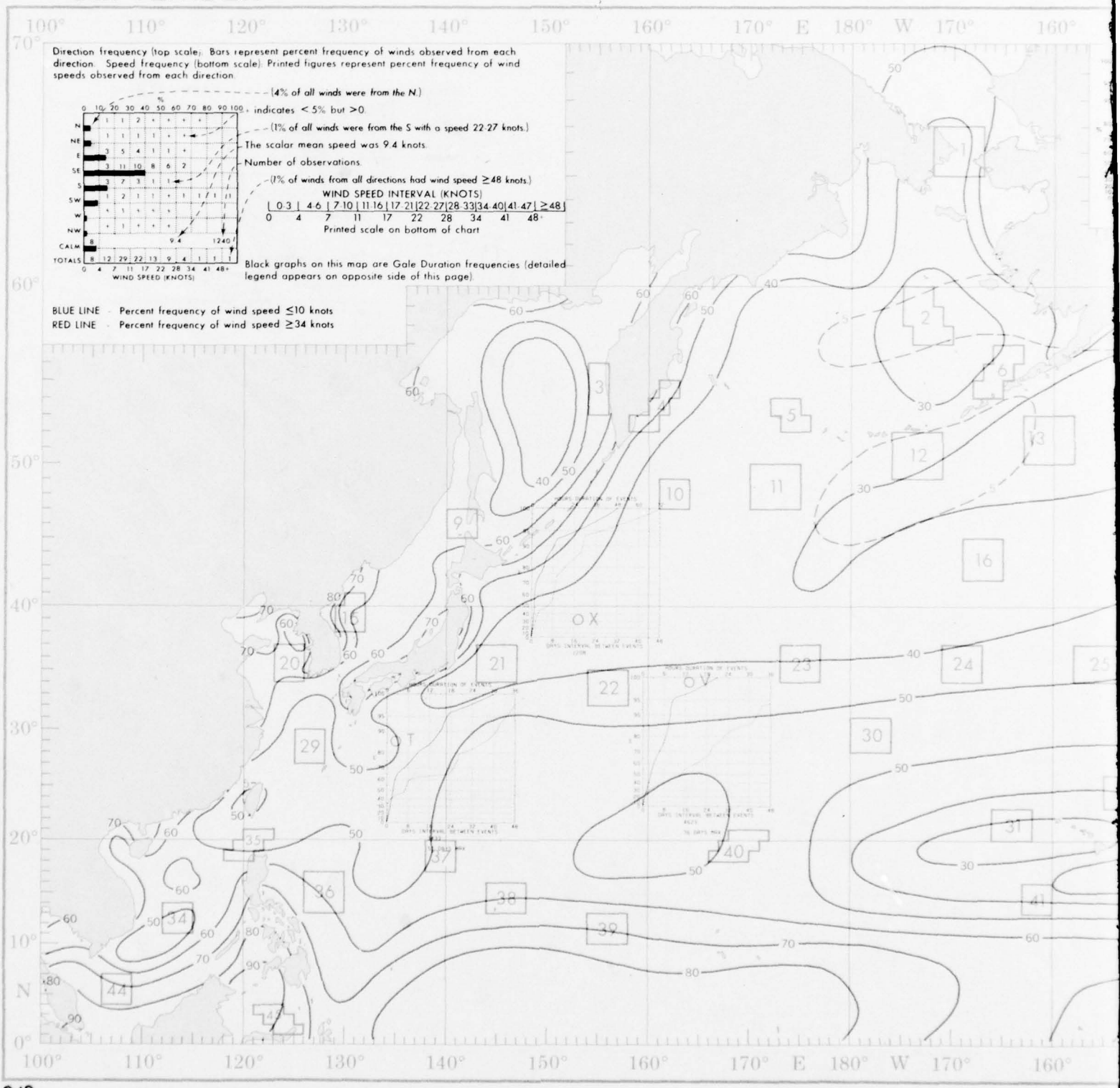
TROPICAL CYCLONE



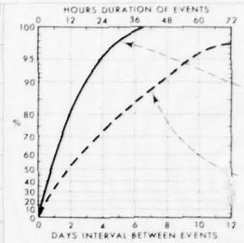
AUGUST


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed. Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency. Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed. Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
(frequency)
100%
80%
60%
40%
20%
50
40
30
20
10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.
140°
135°
130°
125°
120°
115°
110°
105°
100°
95°
90°
85°
80°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
5°
N

SEPTEMBER


Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
indicates < 5% but >0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
WIND SPEED (KNOTS)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

SURFACE WINDS



Hours duration of gales - Days interval between gales

Cumulative percent frequency of hours duration of gales equal to or less than the number of hours intersected by the solid curve refers to the top scale.

(98% of gales had a duration ≤30 hours.)

Cumulative percent frequency of days interval between gales equal to or less than the number of days intersected by the broken curve refers to the bottom scale.

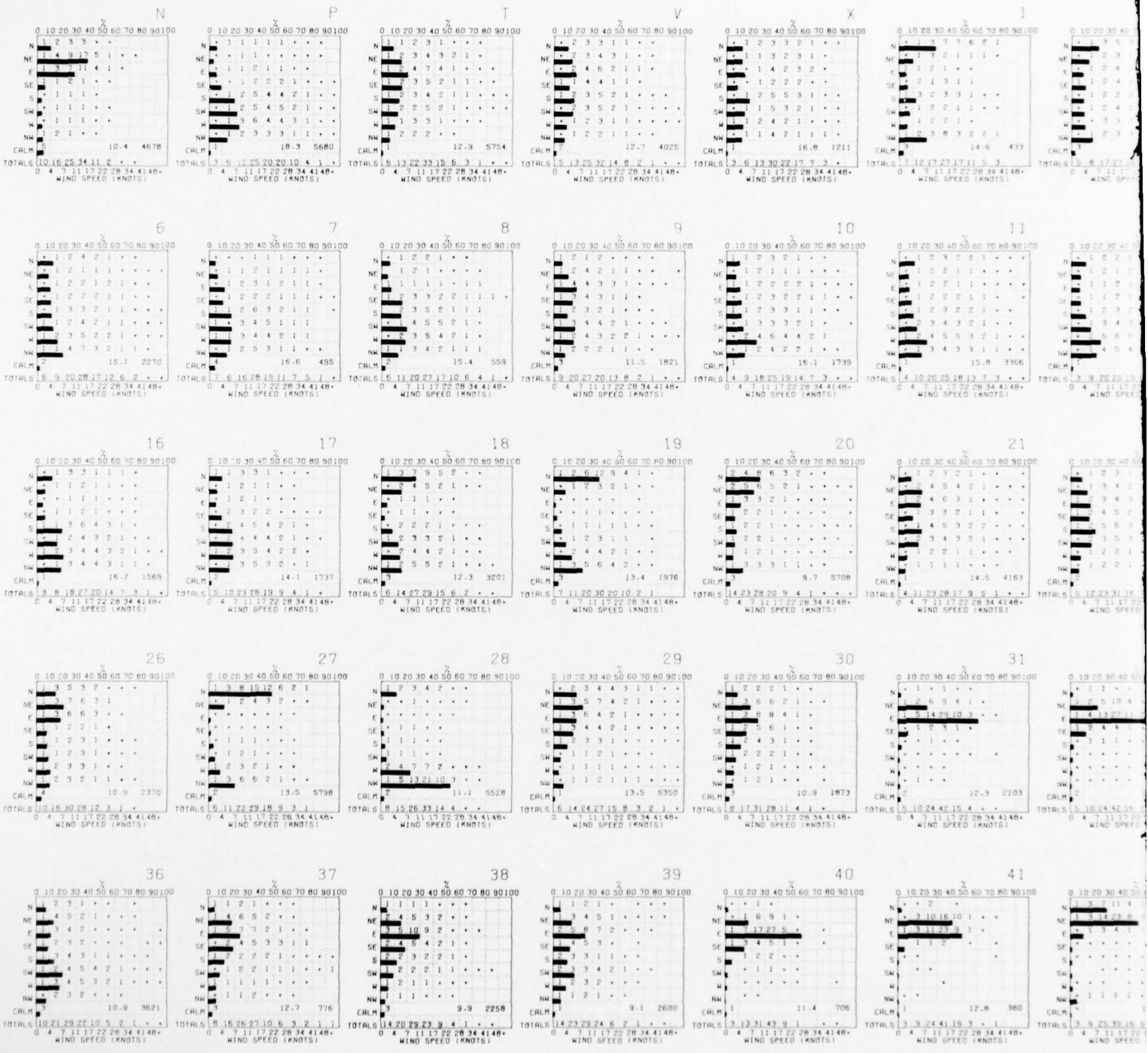
(88% of gales were followed by another gale in 7 days or less.)

Top and bottom scales are variable.
The maximum value(s) of hours duration and/or days interval will be displayed below the graph when the graph limits are exceeded.

(100% of gales were followed by another gale in 15 days or less.)

Durations and intervals for a particular month extend from the time they begin (or the first of the month if already in progress) and are terminated at the actual ending time, regardless of what month that may be.

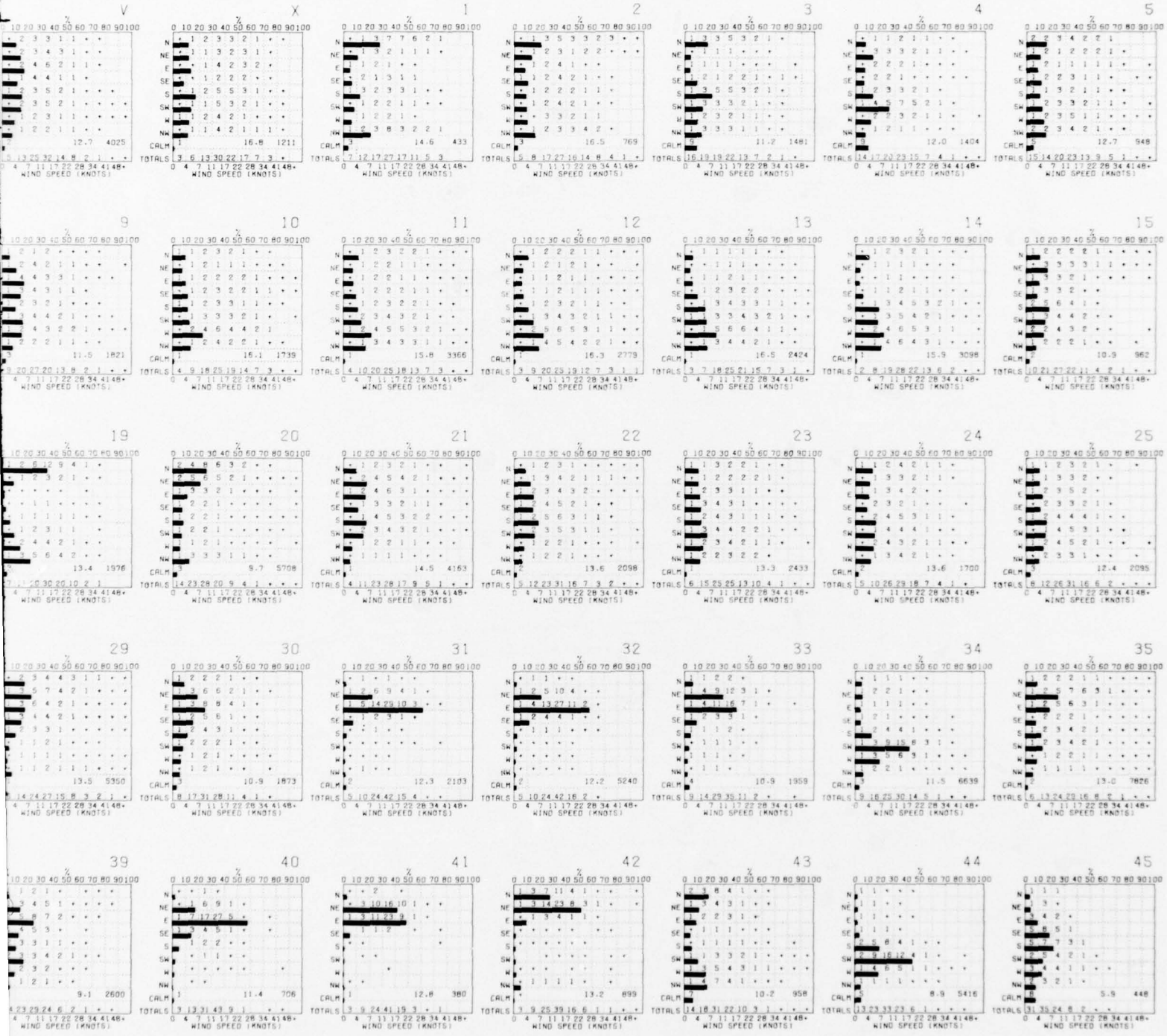
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

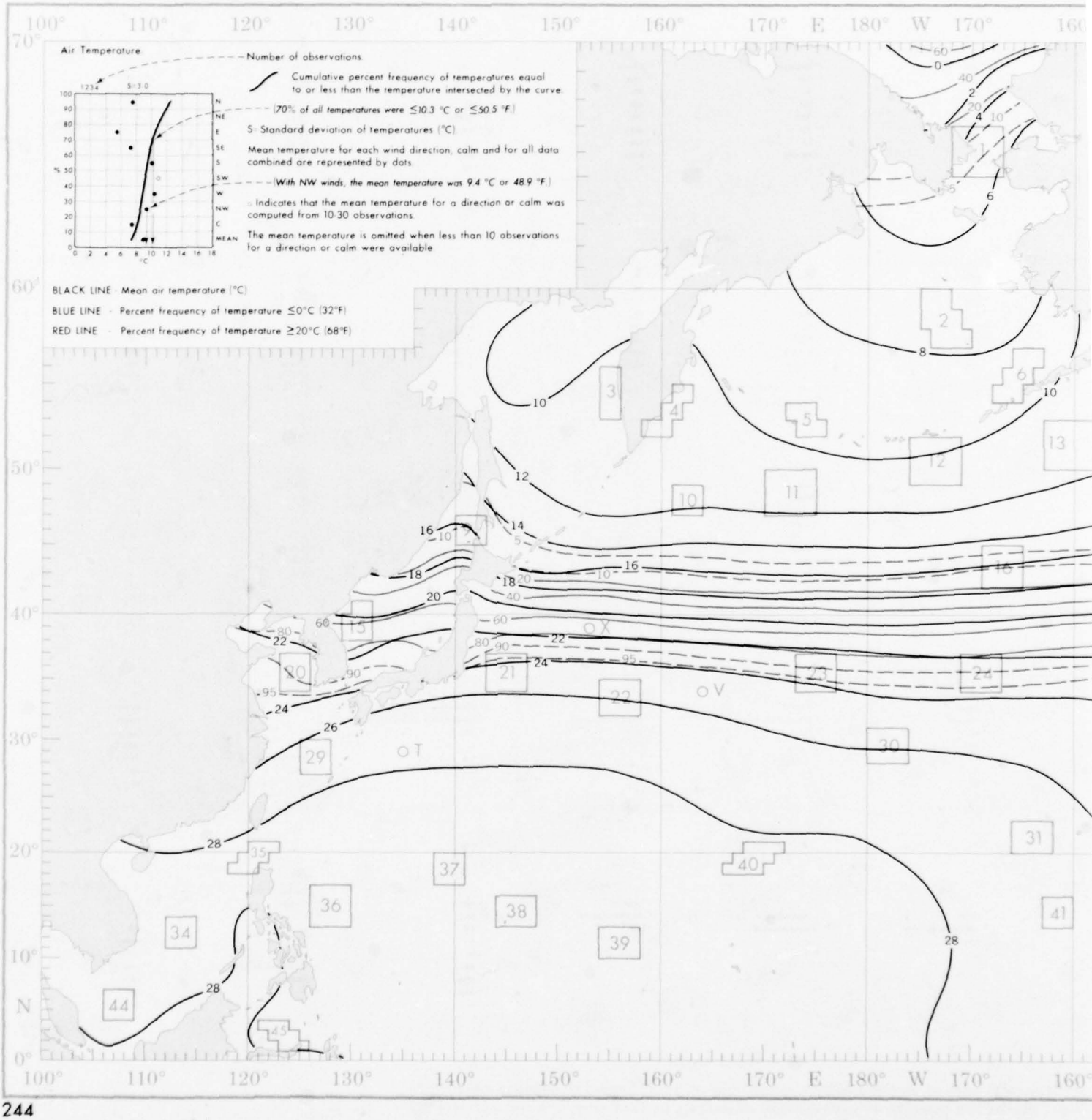
PEED

SEPTEMBER

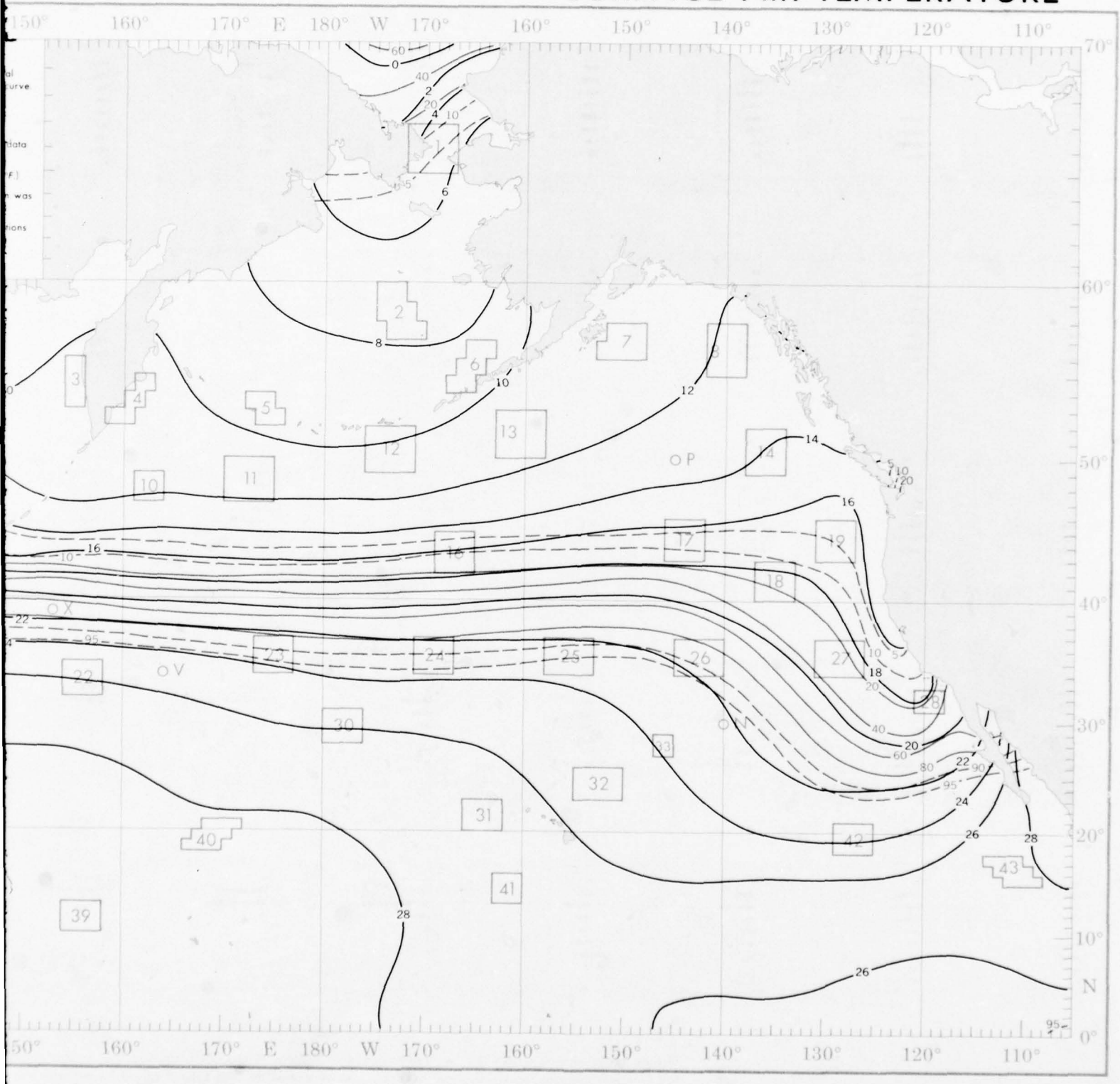


ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

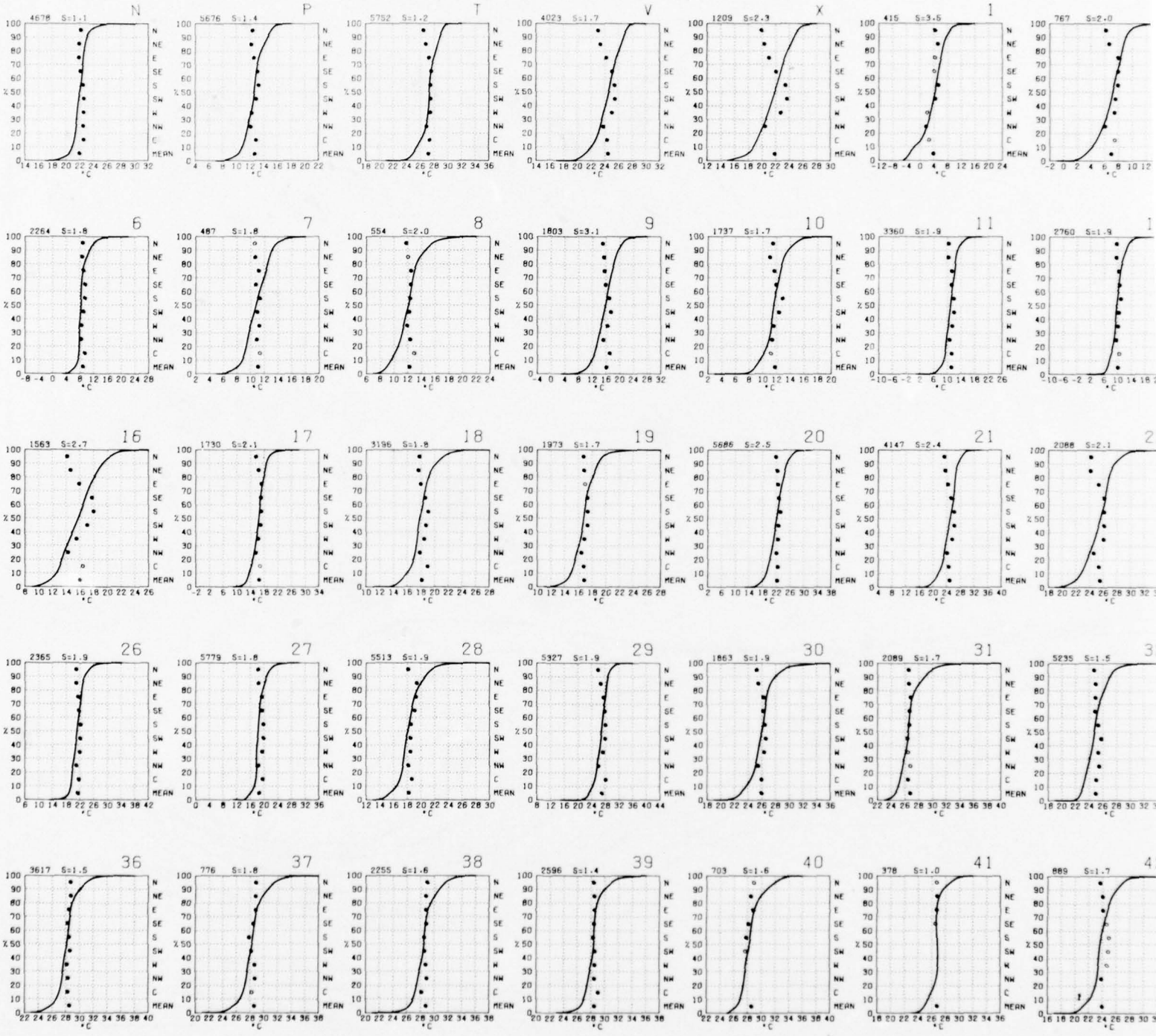
SEPTEMBER


Air Temperature
Number of observations
1234
S=3.0
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S: Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
N
NE
E
SE
S
SW
W
NW
C
MEAN
% 50
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160
70°
60°
50°
40°
30°
20°
10°
N
0°

SURFACE AIR TEMPERATURE

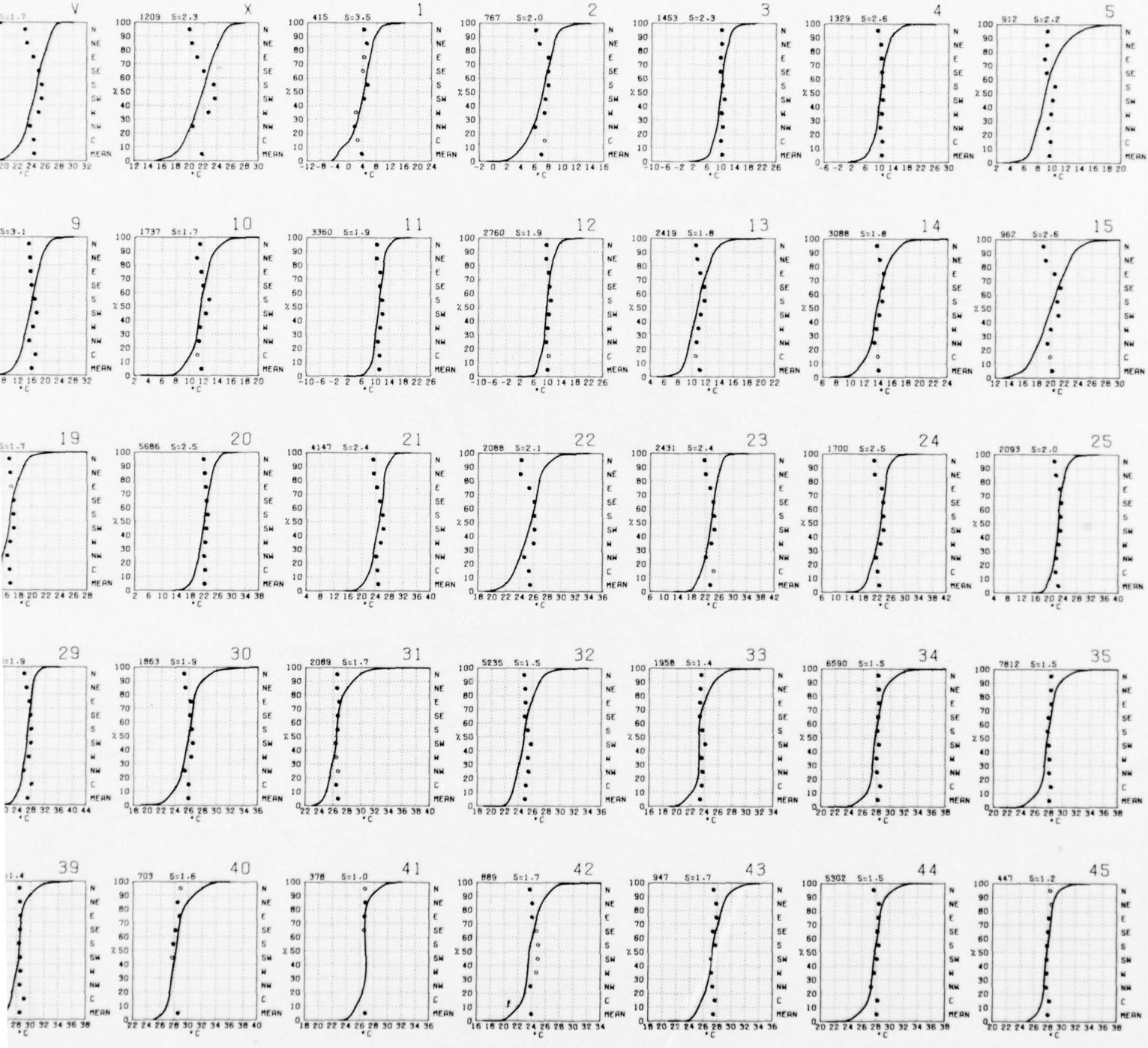


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

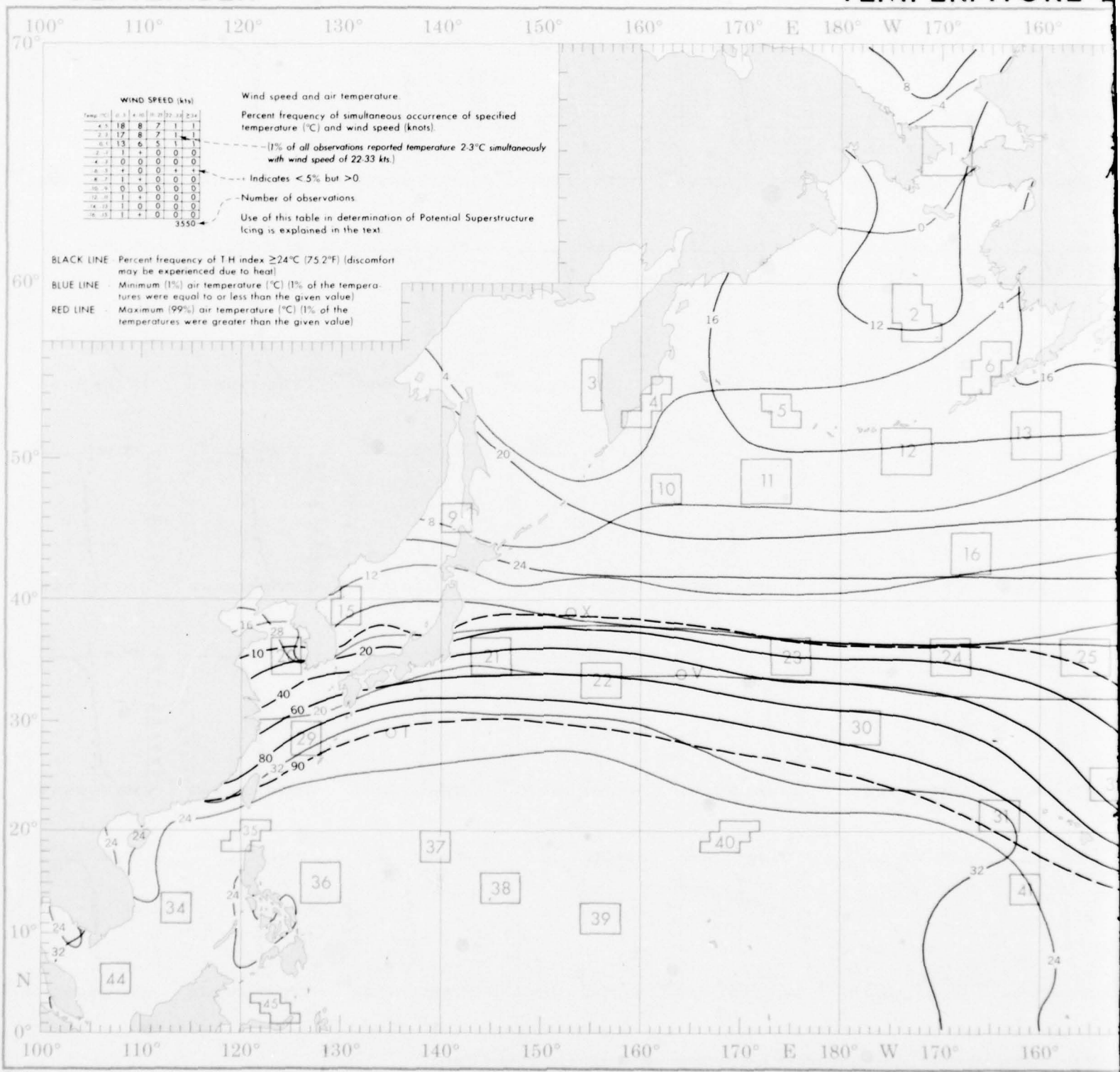
SEPTEMBER



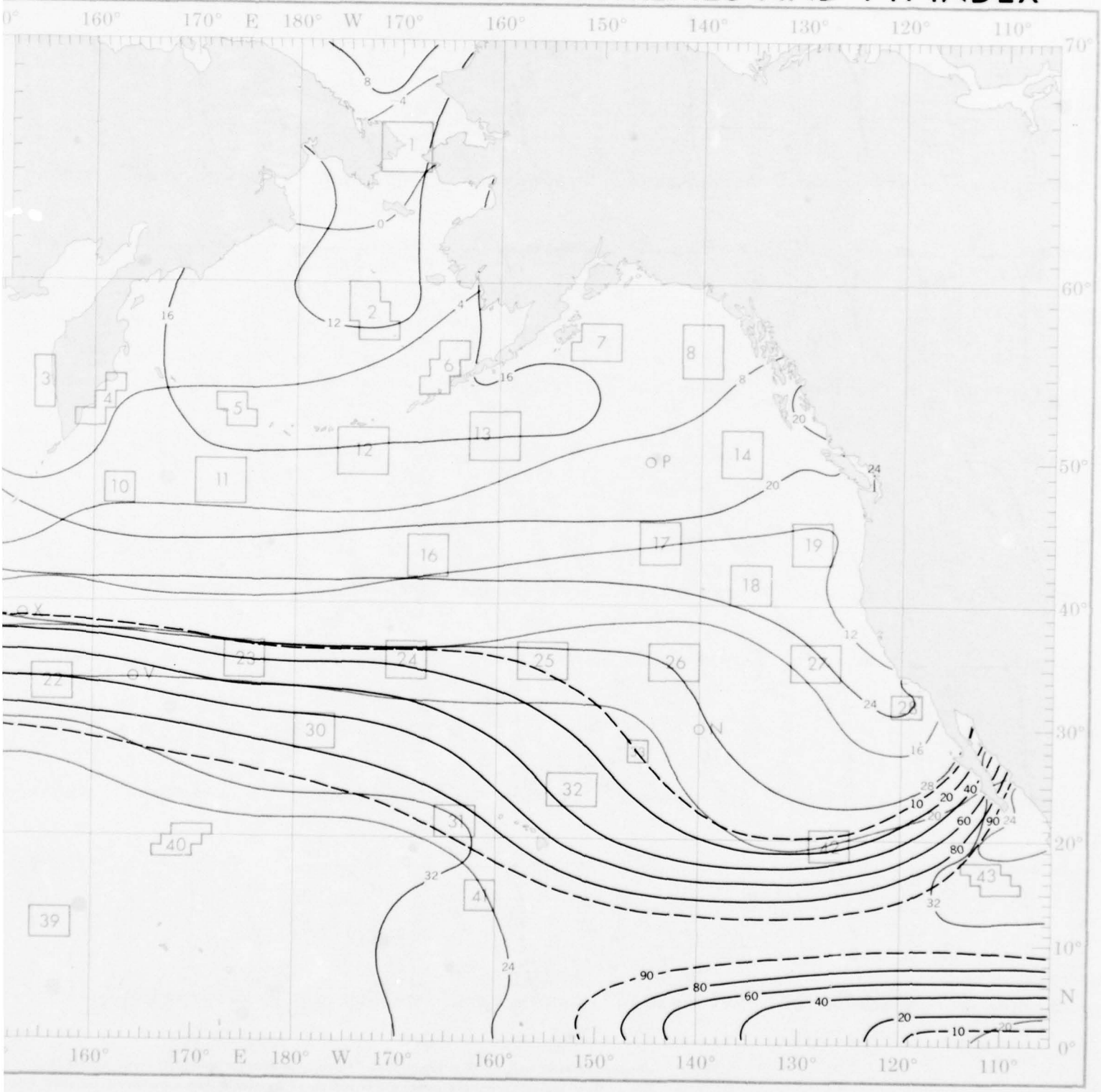
the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER

TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	*	0	0
26.27	*	*	*	0	0
24.25	2	4	3	*	0
22.23	6	27	27	2	0
20.21	2	10	15	1	*
18.19	*	*	*	0	0
16.17	0	*	*	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

4678

P

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	*	*	1	1	*
14.15	1	4	11	8	1
12.13	2	10	24	14	3
10.11	*	2	8	5	1
8.9	0	*	1	*	*
6.7	0	0	*	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

5576

T

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	*	*	*	0	0
28.29	3	16	23	4	1
26.27	3	16	23	4	*
24.25	*	2	3	1	*
22.23	*	*	*	*	*
20.21	0	*	*	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

5753

V

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	*	0	0
28.29	*	*	*	0	0
26.27	1	12	17	4	*
24.25	2	16	16	3	*
22.23	1	8	9	2	*
20.21	*	1	2	1	*
18.19	*	*	*	*	*
16.17	0	0	*	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

4023

X

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	*	1	4	1	*
24.25	1	3	10	4	*
22.23	2	7	17	8	*
20.21	1	5	13	7	1
18.19	*	2	6	3	1
16.17	0	*	1	1	1
14.15	0	0	*	*	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1209

1

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	*	*	0	0
12.13	0	0	*	0	0
10.11	0	1	*	*	0
8.9	1	4	3	1	0
6.7	1	6	11	3	1
4.5	2	7	13	5	1
2.3	1	6	5	4	*
0.1	*	2	5	1	*
-2.-1	*	1	3	*	0
-4.-3	*	3	3	*	0
-6.-5	*	*	*	*	0

415

WIND SPEE

TEMP (°C)	0-3	4-10
12.13	0	1
10.11	1	2
8.9	3	9
6.7	1	9
4.5	*	2
2.3	*	*
0.1	0	0
-2.-1	0	0
-4.-3	0	0
-6.-5	0	0
-8.-7	0	0

6

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	*	0	0
18.19	*	*	*	0	0
16.17	*	*	*	*	0
14.15	*	*	*	*	0
12.13	1	2	2	*	*
10.11	2	8	11	5	*
8.9	2	13	24	9	2
6.7	1	5	8	3	*
4.5	0	*	*	0	*
2.3	0	*	*	0	*
0.1	0	0	0	0	0

2264

7

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.17	*	1	1	*	0
14.15	1	2	3	1	0
12.13	2	7	17	6	1
10.11	2	9	18	8	3
8.9	1	3	7	2	2
6.7	*	1	1	*	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

487

8

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	*	*	*	0	0
18.19	*	*	*	0	0
16.17	1	2	3	*	0
14.15	1	5	6	3	1
12.13	2	14	20	7	2
10.11	2	8	12	5	1
8.9	0	2	2	1	1
6.7	0	*	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

555

9

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	*	0	0	0
24.25	0	*	*	0	0
22.23	*	2	1	*	0
20.21	1	4	4	1	0
18.19	2	11	7	1	*
16.17	3	13	8	2	*
14.15	1	9	6	3	1
12.13	1	5	4	2	*
10.11	*	2	2	*	*
8.9	*	1	*	*	0
≤7	*	*	*	*	0

1803

10

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	*	*	0	*
16.17	*	*	2	*	*
14.15	1	3	5	2	*
12.13	2	12	20	8	1
10.11	1	10	15	9	2
8.9	*	1	3	1	*
6.7	*	*	0	*	0
4.5	0	0	*	*	0
2.3	0	0	*	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1737

11

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	*	0	0
18.19	0	*	*	*	0
16.17	*	1	1	*	*
14.15	*	3	4	1	*
12.13	1	11	15	7	1
10.11	1	11	16	8	1
8.9	*	4	6	3	1
6.7	*	1	1	*	*
4.5	0	*	*	*	0
2.3	0	0	*	0	0
0.1	0	0	0	0	0

3360

WIND SPEE

TEMP (°C)	0-3	4-10
18.19	*	*
16.17	*	*
14.15	*	1
12.13	1	5
10.11	1	12
8.9	1	8
6.7	*	1
4.5	0	*
2.3	0	*
0.1	0	0
-2.-1	0	0

16

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	*	0	*	0	0
22.23	*	*	1	1	0
20.21	*	2	4	2	0
18.19	1	5	10	2	1
16.17	1	8	13	6	1
14.15	1	7	10	5	1
12.13	*	4	7	4	1
10.11	*	1	1	1	*
8.9	0	0	*	*	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1564

17

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	*	*	0	0
24.25	*	*	0	*	0
22.23	*	*	*	*	0
20.21	*	2	2	1	0
18.19	2	8	14	4	*
16.17	2	14	19	5	*
14.15	1	7	9	2	*
12.13	*	1	3	1	1
10.11	0	*	*	*	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1730

18

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	*	0	0
26.27	0	*	*	0	0
24.25	*	*	*	0	0
22.23	*	2	1	*	0
20.21	1	7	6	1	*
18.19	3	18	20	4	*
16.17	1	13	15	2	*
14.15	*	1	2	*	0
12.13	0	*	*	*	0
10.11	0	*	0	*	0
8.9	0	0	0	0	0

3198

19

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	*	0	0	0	0
24.25	0	*	*	0	0
22.23	*	1	1	*	0
20.21	*	1	2	*	0
18.19	2	8	13	4	*
16.17	4	16	26	7	*
14.15	1	5	6	1	*
12.13	*	1	1	*	0
10.11	0	0	*	*	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1976

20

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	*	*	*	*	0
28.29	*	1	1	*	0
26.27	2	5	3	*	*
24.25	3	11	6	1	*
22.23	4	17	9	2	*
20.21	3	12	6	2	*
18.19	1	4	3	1	*
16.17	*	1	1	*	0
14.15	*	*	*	*	0
12.13	0	*	*	*	0
10.11	0	0	0	0	0

5687

21

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	*	*	0	0
30.31	*	*	1	*	0
28.29	*	4	5	2	*
26.27	2	12	16	5	1
24.25	1	9	12	3	*
22.23	1	6	8	3	*
20.21	*	2	3	1	*
18.19	*	1	1	*	*
16.17	0	*	*	0	0
14.15	0	*	0	0	0
12.13	0	0	0	0	0

4147

WIND SPEED

TEMP (°C)	0-3	4-10
32.33	0	*
30.31	*	1
28.29	1	5
26.27	2	16
24.25	2	7
22.23	*	4
20.21	*	1
18.19	0	*
16.17	0	0
14.15	0	0
12.13	0	0

26

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	*	0	0	0	0
30.31	*	*	*	0	0
28.29	*	*	*	0	0
26.27	*	1	1	*	0
24.25	1	4	3	*	0
22.23	4	16	13	2	*
20.21	4	18	17	2	*
18.19	1	6	5	*	*
16.17	*	*	*	*	0
14.15	0	*	*	*	0
12.13	0	0	0	0	0

2368

27

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	*	*	0
26.27	*	*	*	*	0
24.25	*	1	*	*	0
22.23	*	2	2	*	0
20.21	2	7	9	2	*
18.19	3	16	23	5	*
16.17	1	6	12	5	*
14.15	*	*	1	*	*
12.13	0	*	*	*	0
10.11	0	*	0	0	0
8.9	0	0	0	0	0

5783

28

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	*	0	0	0
26.27	*	*	*	*	0
24.25	*	*	*	*	0
22.23	*	2	2	*	0
20.21	2	8	7	*	0
18.19	4	17	21	2	*
16.17	2	12	15	2	*
14.15	*	1	1	*	0
12.13	0	*	*	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

5516

29

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	*	*	0	0
32.33	*	1	*	0	0
30.31	1	3	3	1	*
28.29	3	15	16	3	1
26.27	2	13	16	5	1
24.25	*	5	6	2	*
22.23	*	1	1	1	*
20.21	0	*	*	*	0
18.19	0	0	0	*	0
16.17	0	0	0	*	0
14.15	0	0	0	0	0

5335

30

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	*	*	*	0	0
32.33	*	1	*	0	0
30.31	*	1	1	*	0
28.29	1	7	3	*	0
26.27	4	26	20	2	0
24.25	2	11	11	2	*
22.23	*	2	3	*	0
20.21	0	*	*	0	0
18.19	*	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1863

31

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	0	*	0	0
36.37	0	0	*	0	0
34.35	*	0	*	0	0
32.33	*	*	1	*	0
30.31	*	2	3	0	0
28.29	1	6	10	*	0
26.27	4	21	37	3	*
24.25	1	5	6	1	0
22.23	*	*	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0

2093

WIND SPEED

TEMP (°C)	0-3	4-10
32.33	*	*
30.31	*	*
28.29	*	2
26.27	2	11
24.25	2	16
22.23	1	5
20.21	0	*
18.19	0	0
16.17	0	0
14.15	0	0
12.13	0	0

36

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	*	0	0
34.35	0	*	*	0	0
32.33	*	2	1	*	0
30.31	2	8	6	1	*
28.29	6	30	17	4	1
26.27	2	9	7	2	*
24.25	*	1	1	*	*
22.23	0	*	0	*	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3617

37

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	*	0	0
34.35	*	1	*	0	0
32.33	1	3	2	0	0
30.31	1	8	6	*	0
28.29	6	23	20	5	1
26.27	1	7	7	3	2
24.25	*	1	1	1	1
22.23	0	0	*	*	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

778

38

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	*	0	0
34.35	*	*	*	0	0
32.33	2	3	1	*	0
30.31	4	10	4	*	0
28.29	7	29	21	3	*
26.27	2	6	6	1	*
24.25	*	1	*	*	0
22.23	0	0	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2259

39

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	*	*	*	0	0
32.33	1	1	1	0	0
30.31	2	7	3	*	0
28.29	9	35	20	1	*
26.27	2	9	5	1	*
24.25	*	1	*	*	0
22.23	0	0	*	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2596

40

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	*	*	0	0
32.33	0	3	5	0	0
30.31	*	4	8	0	0
28.29	2	26	27	1	*
26.27	1	10	12	*	*
24.25	0	*	*	*	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

703

41

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	1	0	0
28.29	1	5	15	0	0
26.27	2	26	41	3	1
24.25	0	1	5	0	0
22.23	0	*	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

378

WIND SPEED

TEMP (°C)	0-3	4-10
34.35	0	*
32.33	0	0
30.31	*	*
28.29	0	1
26.27	*	5
24.25	1	11
22.23	1	14
20.21	*	2
18.19	0	0
16.17	0	0
14.15	0	0

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

ERATURE

SEPTEMBER

V

PEED (KTS)				
4-10	11-21	22-33	≥ 34	
0	+	0	0	
+	+	0	0	
12	17	4	+	
16	16	3	+	
8	9	2	+	
1	2	1	+	
+	+	+	+	
0	+	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

4023

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	1	4	1	+
24.25	1	3	10	4	+
22.23	2	7	17	8	+
20.21	1	5	13	7	1
18.19	+	2	6	3	1
16.17	0	+	1	1	1
14.15	0	0	+	+	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1209

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	0	0
12.13	0	0	+	0	0
10.11	0	1	+	+	0
8.9	1	4	3	1	0
6.7	1	6	11	3	1
4.5	2	7	13	5	1
2.3	1	6	5	4	+
0.1	+	2	5	1	+
-2.-1	+	1	3	+	0
-4.-3	+	3	3	+	0
-6.-5	+	+	+	+	0

415

2

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	1	+	0	0
10.11	1	2	3	1	0
8.9	3	9	20	7	+
6.7	1	9	13	6	2
4.5	+	2	5	6	2
2.3	+	+	2	2	1
0.1	0	0	+	+	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

767

3

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	+	+	+	0	+
16.17	+	1	+	+	0
14.15	1	2	1	+	+
12.13	4	12	10	2	+
10.11	5	13	13	4	1
8.9	4	7	8	3	0
6.7	1	3	3	+	+
4.5	+	+	+	+	0
2.3	+	0	+	0	0
0.1	0	0	+	0	0

1453

4

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	0	+	0	0	0
22.23	0	0	+	0	0
20.21	+	+	+	0	0
18.19	+	1	+	0	0
16.17	1	1	1	+	0
14.15	1	2	2	1	0
12.13	4	9	7	2	+
10.11	5	16	16	4	+
8.9	2	5	7	3	1
6.7	1	2	1	1	+
4.5	+	+	+	+	0

1329

5

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	0	0	0	0
16.17	1	1	+	0	0
14.15	1	1	1	+	0
12.13	4	5	3	1	0
10.11	4	11	9	3	1
8.9	3	12	18	7	1
6.7	1	3	5	3	+
4.5	0	0	+	+	0
2.3	0	+	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

913

9

PEED (KTS)				
4-10	11-21	22-33	≥ 34	
+	0	0	0	
+	+	0	0	
2	1	+	0	
4	4	1	0	
11	7	1	+	
13	8	2	+	
4	6	3	1	
5	4	2	+	
2	2	+	+	
1	+	+	0	
+	+	+	0	

1803

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	+
16.17	+	+	2	+	+
14.15	1	3	5	2	+
12.13	2	12	20	8	1
10.11	1	10	15	9	2
8.9	+	1	3	1	+
6.7	+	+	0	+	0
4.5	0	0	+	+	0
2.3	0	0	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1737

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	+	+	+	0
16.17	+	1	2	1	+
14.15	+	3	4	1	+
12.13	1	11	15	7	1
10.11	1	11	16	8	1
8.9	+	4	6	3	1
6.7	+	1	+	+	+
4.5	0	+	+	+	0
2.3	0	+	+	0	0
0.1	0	0	0	0	0

3360

12

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	+	+	0	+
16.17	+	+	+	+	+
14.15	+	1	2	1	+
12.13	1	5	9	3	+
10.11	1	12	19	8	2
8.9	1	8	13	6	2
6.7	+	1	2	1	+
4.5	0	+	+	+	+
2.3	0	+	+	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2760

13

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	+	0	0
18.19	0	+	0	+	0
16.17	0	+	1	+	0
14.15	+	2	4	2	+
12.13	1	9	14	7	1
10.11	1	10	21	9	2
8.9	1	4	6	4	1
6.7	+	+	+	+	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

2419

14

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	+	0
20.21	0	+	+	+	0
18.19	+	1	1	+	+
16.17	1	5	9	3	+
14.15	1	11	22	7	1
12.13	1	8	15	7	1
10.11	+	1	3	1	+
8.9	0	0	+	+	0
6.7	0	0	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3088

15

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	0	0	0
28.29	0	+	+	0	0
26.27	+	1	1	+	+
24.25	1	4	2	+	0
22.23	2	13	8	+	+
20.21	3	12	10	1	+
18.19	3	13	8	2	1
16.17	1	4	3	1	+
14.15	+	1	1	1	+
12.13	0	+	0	+	0
10.11	0	0	0	0	0

962

19

PEED (KTS)				
4-10	11-21	22-33	≥ 34	
0	0	0	0	
+	+	0	0	
+	1	+	0	
8	13	4	+	
15	26	7	+	
5	6	1	+	
1	1	+	0	
0	+	+	0	
0	0	0	0	
0	0	0	0	

1976

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	+	0
28.29	+	1	1	+	+
26.27	2	5	3	+	+
24.25	3	11	6	1	+
22.23	4	17	9	2	+
20.21	3	12	6	2	+
18.19	1	4	3	1	+
16.17	+	1	1	+	0
14.15	+	+	+	+	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0

5687

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	1	+	+
28.29	+	4	5	2	+
26.27	2	12	16	5	1
24.25	1	9	12	3	+
22.23	1	6	8	3	+
20.21	+	2	3	1	+
18.19	+	1	1	+	+
16.17	0	+	+	0	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0

4147

22

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	1	1	+	0
28.29	1	5	5	1	+
26.27	2	16	20	5	+
24.25	2	7	12	2	1
22.23	+	4	7	2	1
20.21	+	1	1	+	+
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2088

23

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	0	0
28.29	+	2	1	+	0
26.27	1	9	7	2	1
24.25	2	14	12	3	+
22.23	2	9	10	5	+
20.21	1	4	6	3	+
18.19	+	1	2	1	+
16.17	+	+	+	+	+
14.15	0	0	+	0	0
12.13	+	0	0	0	0

2431

24

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	+	0	0
28.29	+	1	+	+	0
26.27	1	5	4	1	0
24.25	1	11	15	3	+
22.23	2	12	13	3	+
20.21	1	5	8	2	+
18.19	+	2	4	2	+
16.17	+	+	1	+	+
14.15	0	+	+	+	+
12.13	0	0	+	+	0

1701

25

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	+	0	0
28.29	+	1	+	0	0
26.27	1	3	3	+	0
24.25	2	9	12	2	+
22.23	3	17	21	3	+
20.21	1	7	8	2	+
18.19	+	2	2	+	+
16.17	+	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2094

29

EED (KTS)				
-10	11-21	22-33	≥ 34	
+	+	0	0	
1	+	0	0	
3	3	1	+	
15	16	3	1	
13	16	5	1	
5	6	2	+	
1	1	1	+	
+	+	+	0	
0	+	0	0	
0	0	0	0	

5335

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	+	1	+	0	0
30.31	+	1	1	+	0
28.29	1	7	3	+	0
26.27	4	26	20	2	0
24.25	2	11	11	2	+
22.23	+	2	3	+	0
20.21	0	+	+	0	0
18.19	+	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1863

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
38.39	0	0	+	0	0
36.37	0	0	+	0	0
34.35	+	0	+	0	0
32.33	+	0	+	0	0
30.31	+	2	3	0	0
28.29	1	6	10	+	0
26.27	4	21	37	3	+
24.25	1	5	6	1	0
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0

2093

32

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	+	0
30.31	+	+	1	0	0
28.29	+	2	3	+	0
26.27	2	11	17	1	0
24.25	2	16	25	1	0
22.23	1	5	8	+	0
20.21	0	+	+	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

5236

33

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	+	+	0	0
28.29	+	1	0	0	0
26.27	1	4	2	+	0
24.25	3	14	13	+	+
22.23	4	22	28	1	0
20.21	+	2	2	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1958

34

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	+	+	0	0
34.35	+	+	+	0	0
32.33	+	1	1	+	0
30.31	2	6	6	1	+
28.29	5	23	24	3	+
26.27	2	10	11	2	+
24.25	+	1	1	+	+
22.23	0	0	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

6603

35

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	+	+	+	0	0
34.35	+	+	+	+	0
32.33	+	1	1	+	0
30.31	1	5	6	1	+
28.29	3	21	25	6	1
26.27	1	10	12	3	+
24.25	+	1	1	+	+
22.23	0	+	+	+	+
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

7818

39

EED (KTS)				
10	11-21	22-33	≥ 34	
+	+	0	0	
1	1	0	0	
7	3	+	0	
15	20	1	+	
9	5	1	+	
1	+	+	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

2596

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	0	3	5	0	0
30.31	+	4	8	0	0
28.29	2	26	27	1	+
26.27	1	10	12	+	+
24.25	0	+	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

703

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	1	1	0	0
28.29	1	5	15	0	0
26.27	2	26	41	3	1
24.25	0	1	5	0	0
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

378

42

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	0	0	+	0	0
30.31	+	+	+	0	0
28.29	0	1	1	+	0
26.27	+	5	9	1	+
24.25	1	11	23	4	+
22.23	1	14	20	1	+
20.21	+	2	2	+	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

890

43

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	+	1	1	0	0
30.31	2	5	2	+	0
28.29	5	19	11	1	+
26.27	6	21	15	2	1
24.25	+	3	3	1	+
22.23	0	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

948

44

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	+	1	1	+	0
30.31	1	7	3	+	0
28.29	9	35	17	1	0
26.27	2	12	7	1	+
24.25	+	1	1	+	+
22.23	+	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

5311

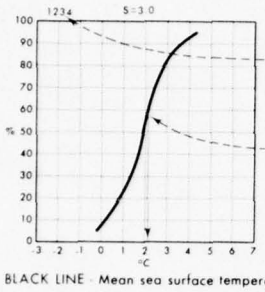
45

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	0	0	0	0
32.33	+	+	0	0	0
30.31	3	6	0	0	0
28.29	21	35	5	+	0
26.27	6	16	5	+	0
24.25	+	1	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

452

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER



Sea surface temperature.

Number of observations.

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

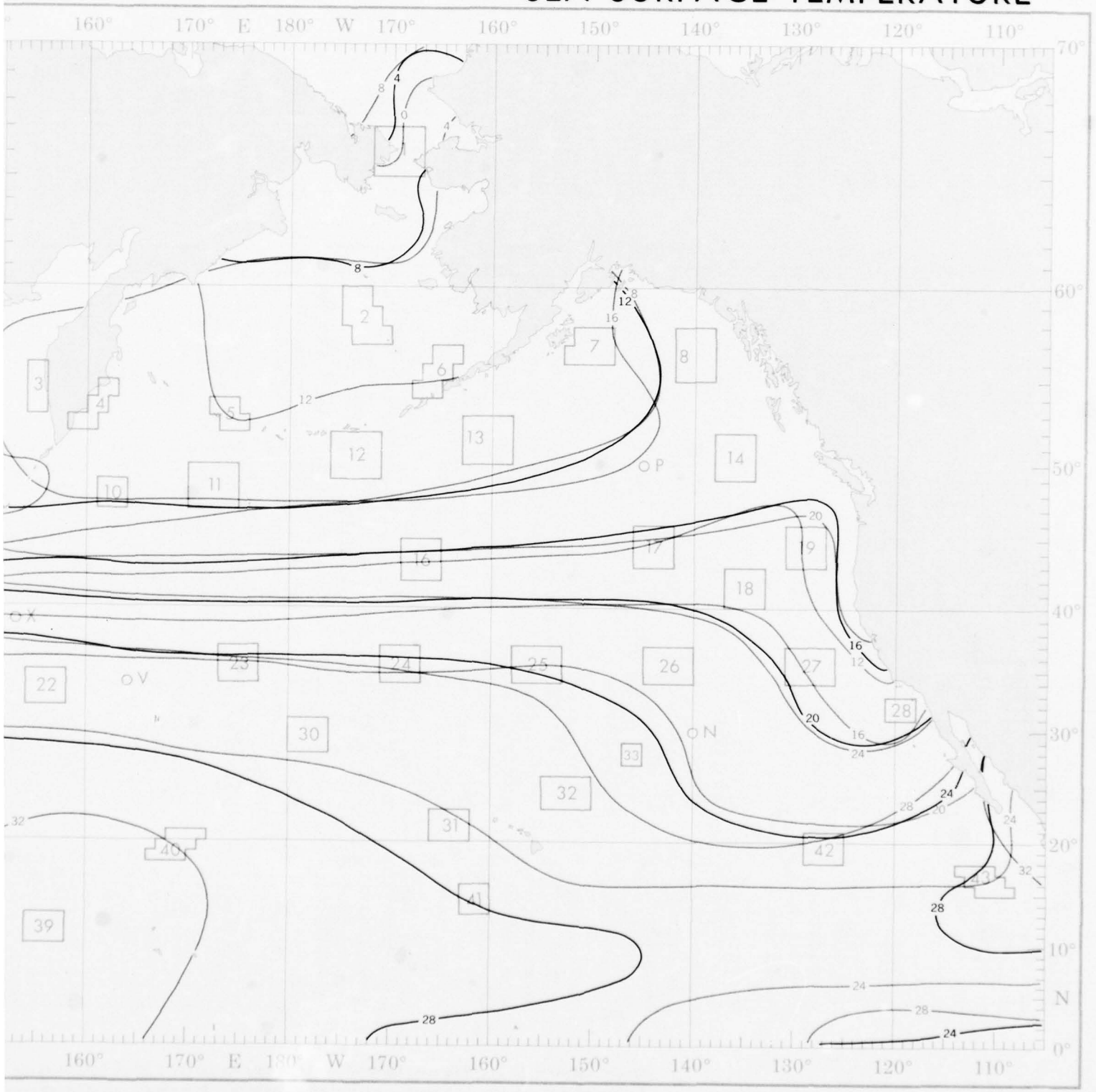
S = Standard deviation of sea surface temperatures (°C).

BLACK LINE - Mean sea surface temperature (°C)

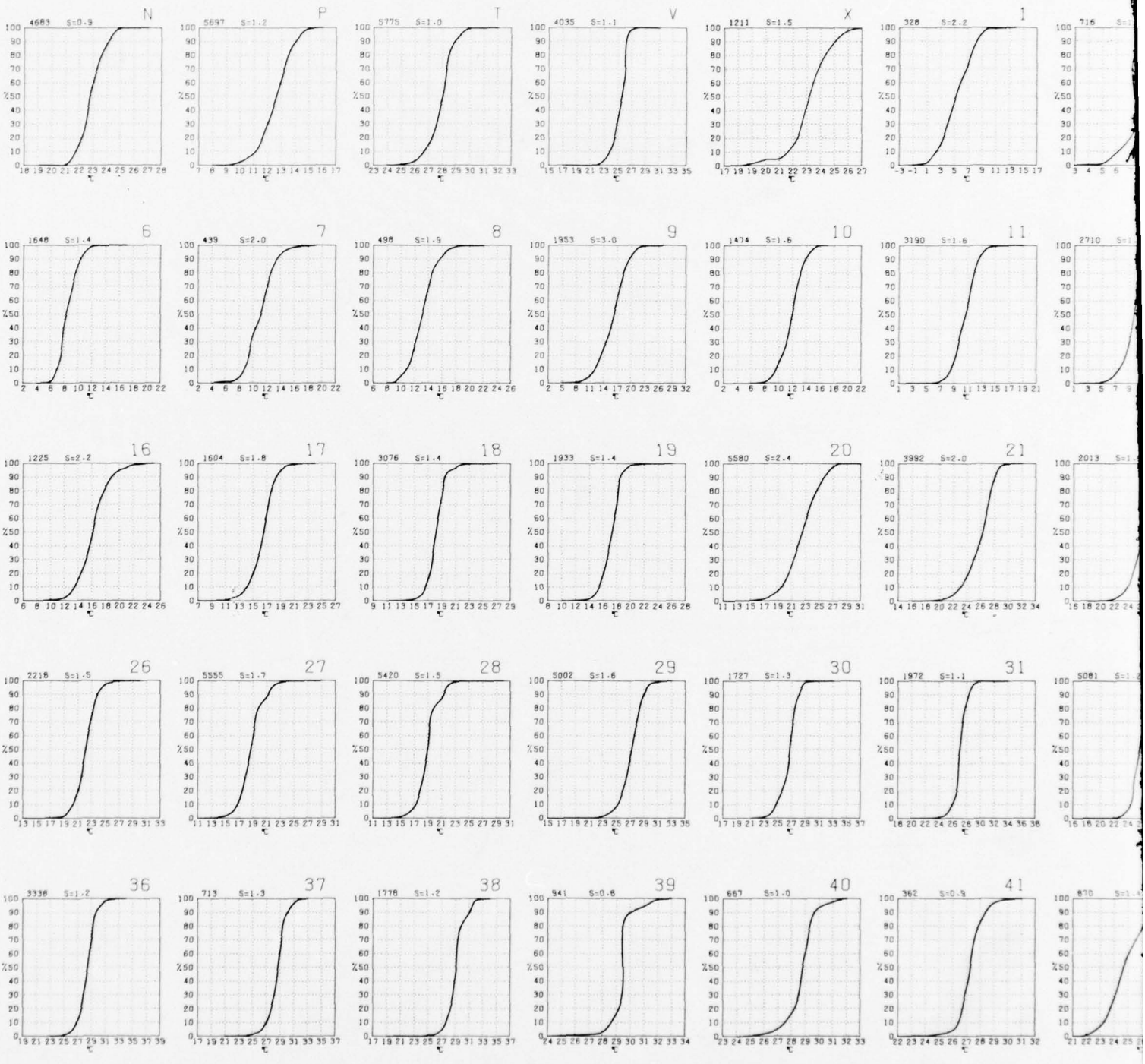
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

SEA SURFACE TEMPERATURE



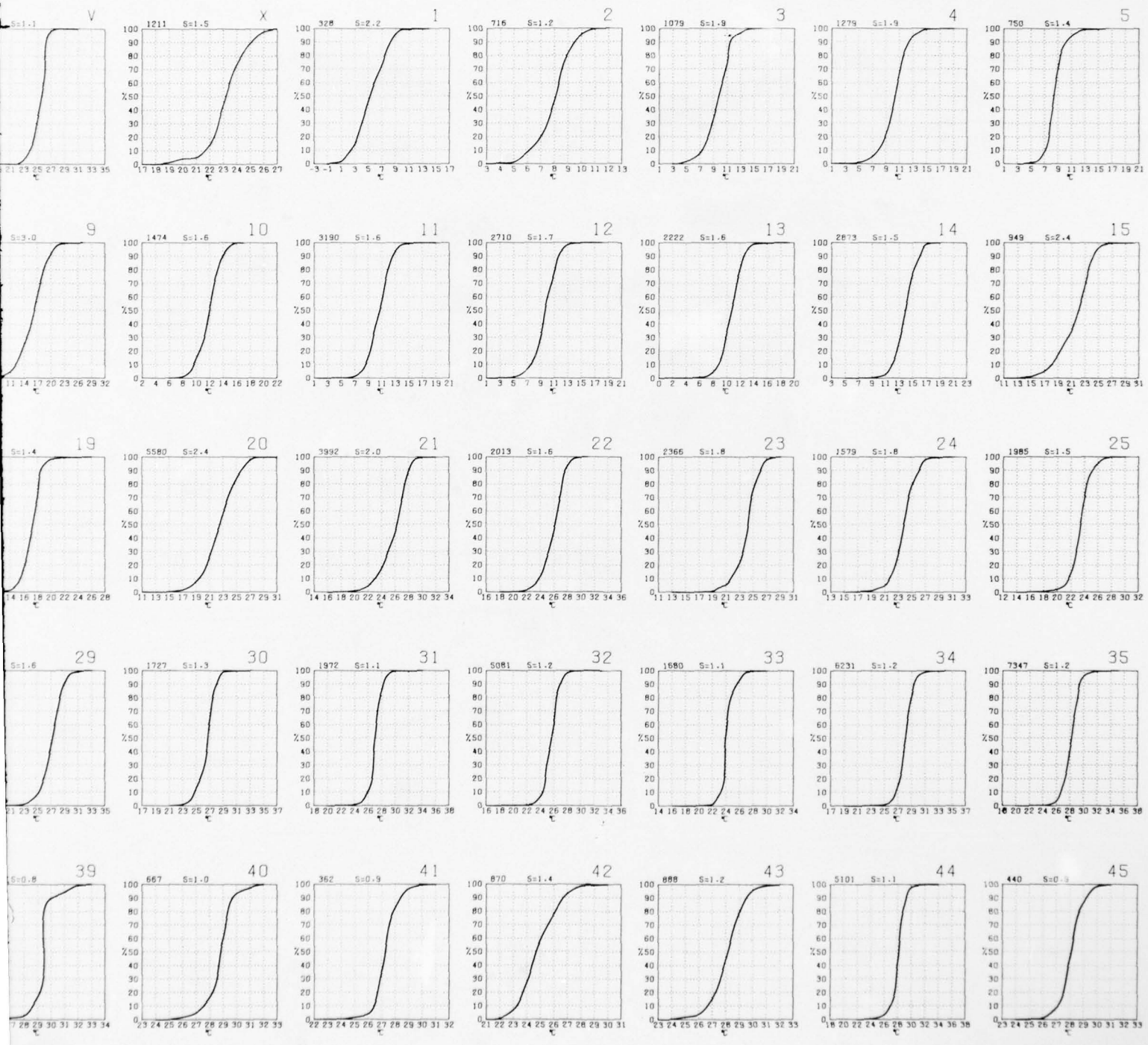
SEA SURFACE TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

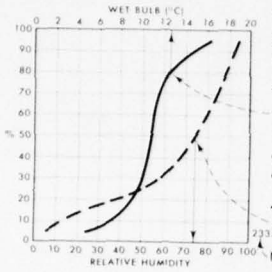
E

SEPTEMBER



the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER



Wet bulb - Relative humidity

Cumulative percent frequency of wet bulb temperatures equal to or less than the temperature intersected by the curve (top scale)

Wet bulb (°C)

(80% of all observed wet bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)

Relative humidity (%)

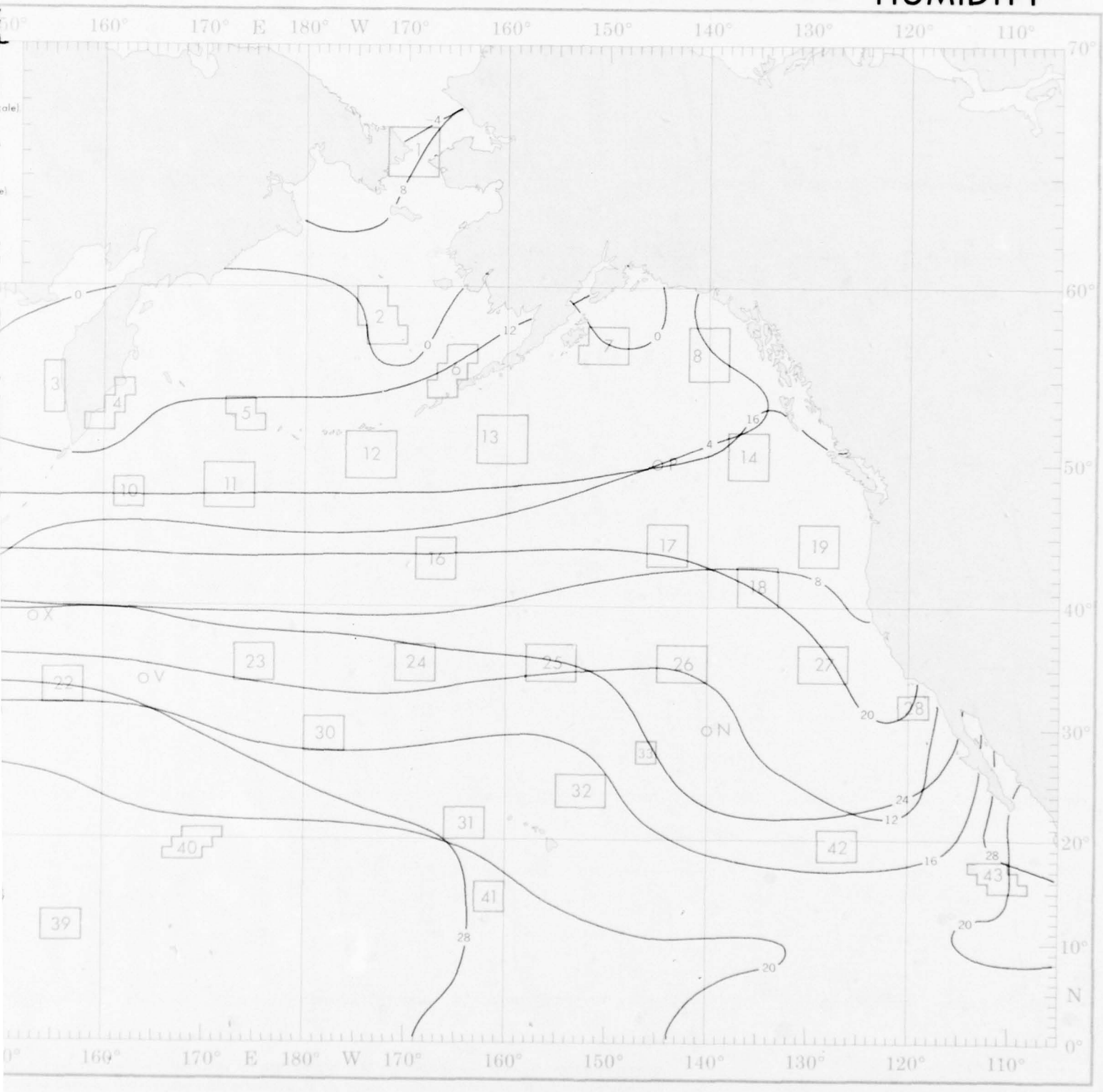
(50% of all observed relative humidities were ≤74%.)

Number of observations

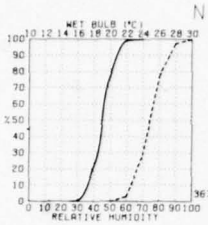
BLUE LINE - Minimum (1%) dew point temperature (°C) (1% of the computed values were equal to or less than the given value)

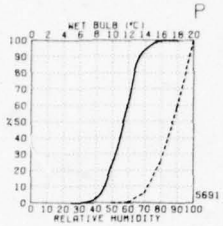
RED LINE - Maximum (99%) dew point temperature (°C) (1% of the computed values were greater than the given value)

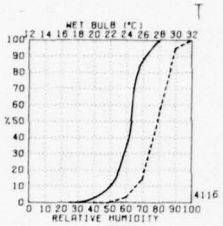
HUMIDITY

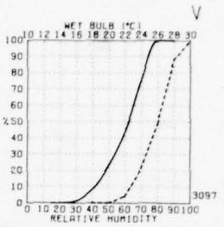

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0°
N
1
2
3
4
5
6
7
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11
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20
24
28

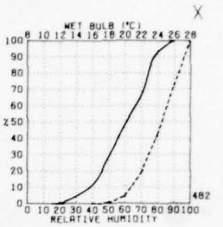
WET BULB AND RELATIVE HUMIDITY

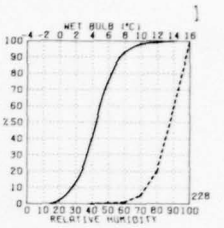


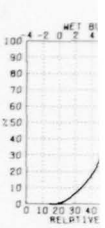


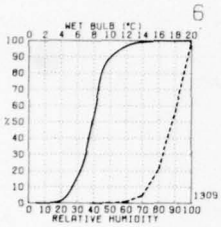


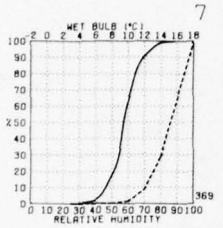


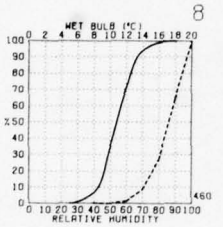


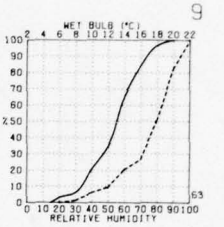


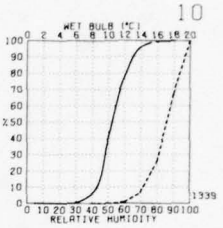


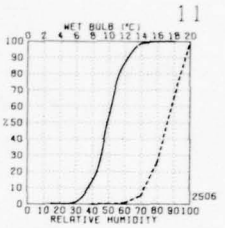


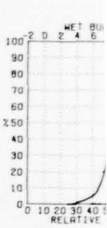


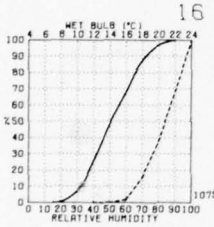


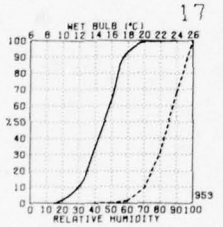


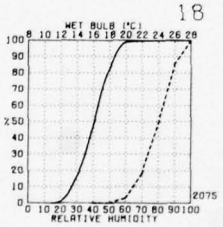


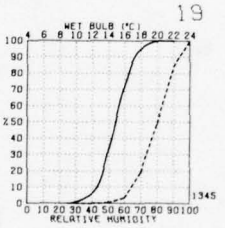


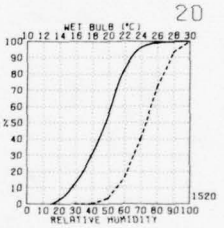


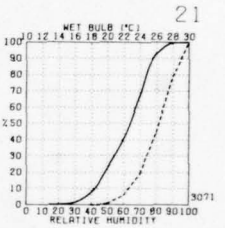


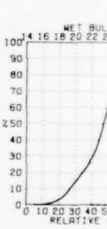


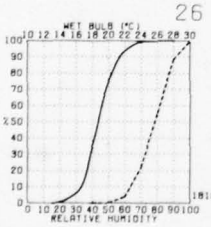


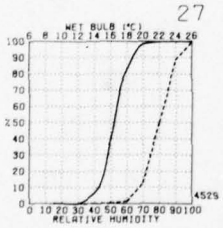


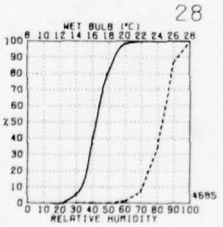


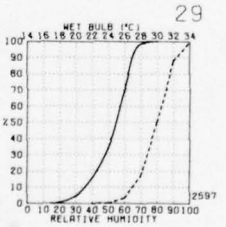


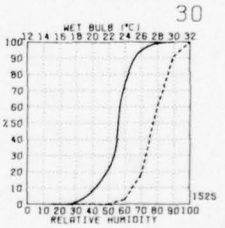


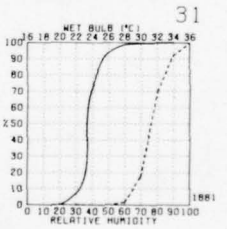


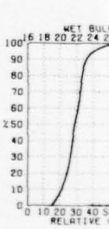


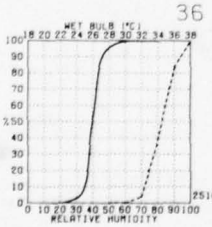


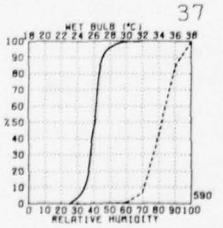


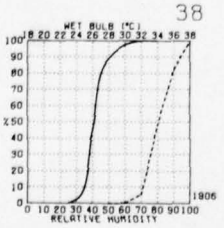


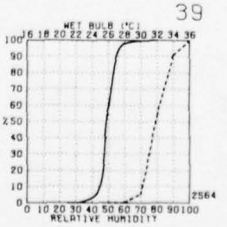


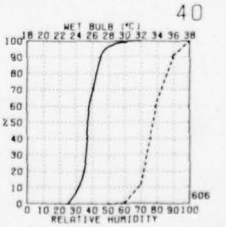


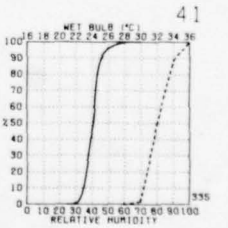


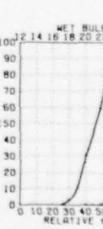








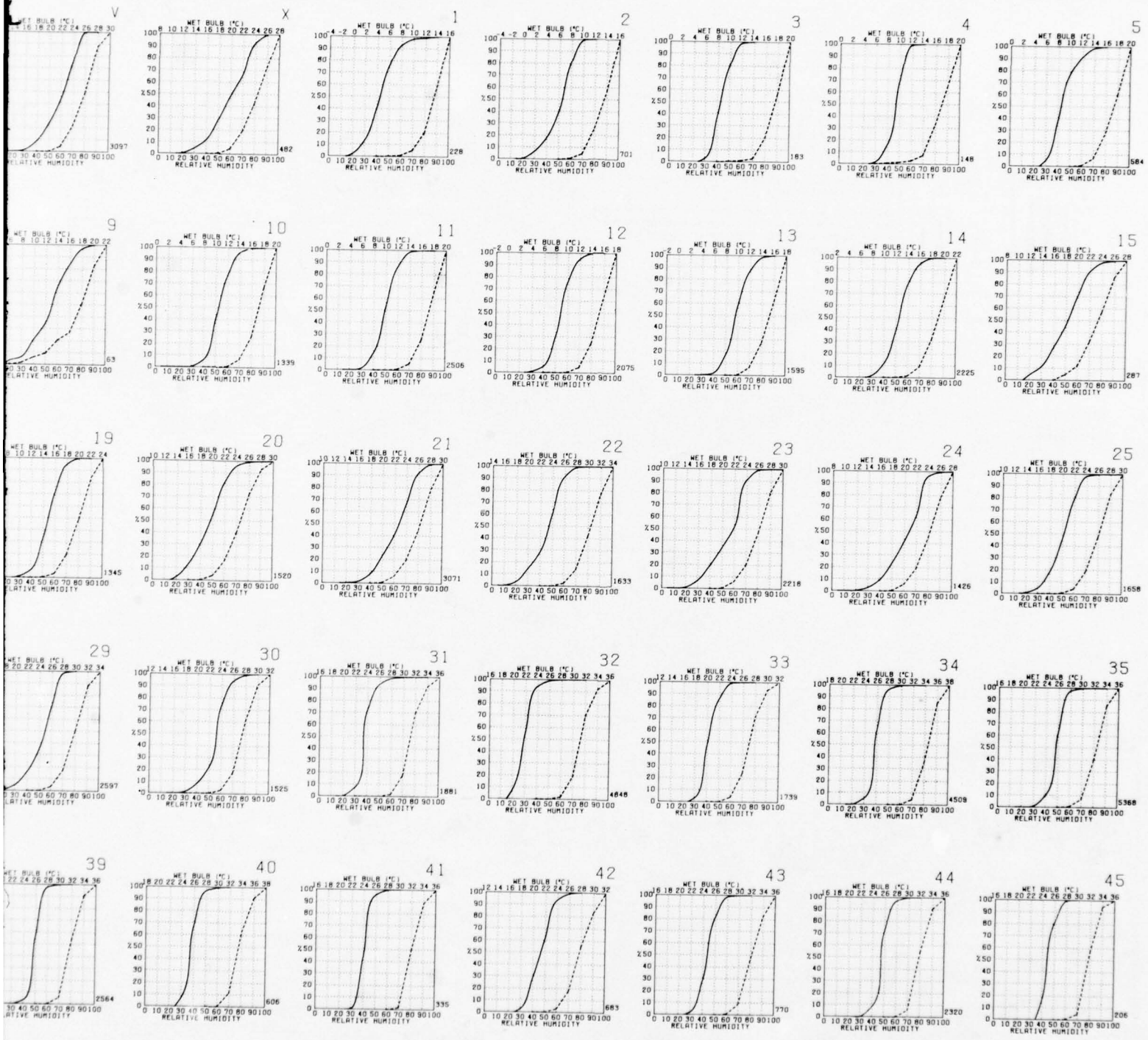




Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

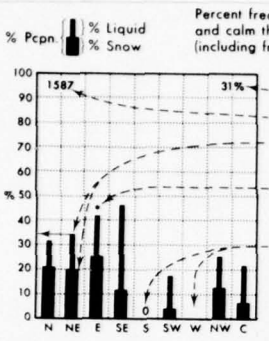
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Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.

Percentage of present weather observations reporting precipitation.

Number of observations.

(34% of *all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.*)

An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).

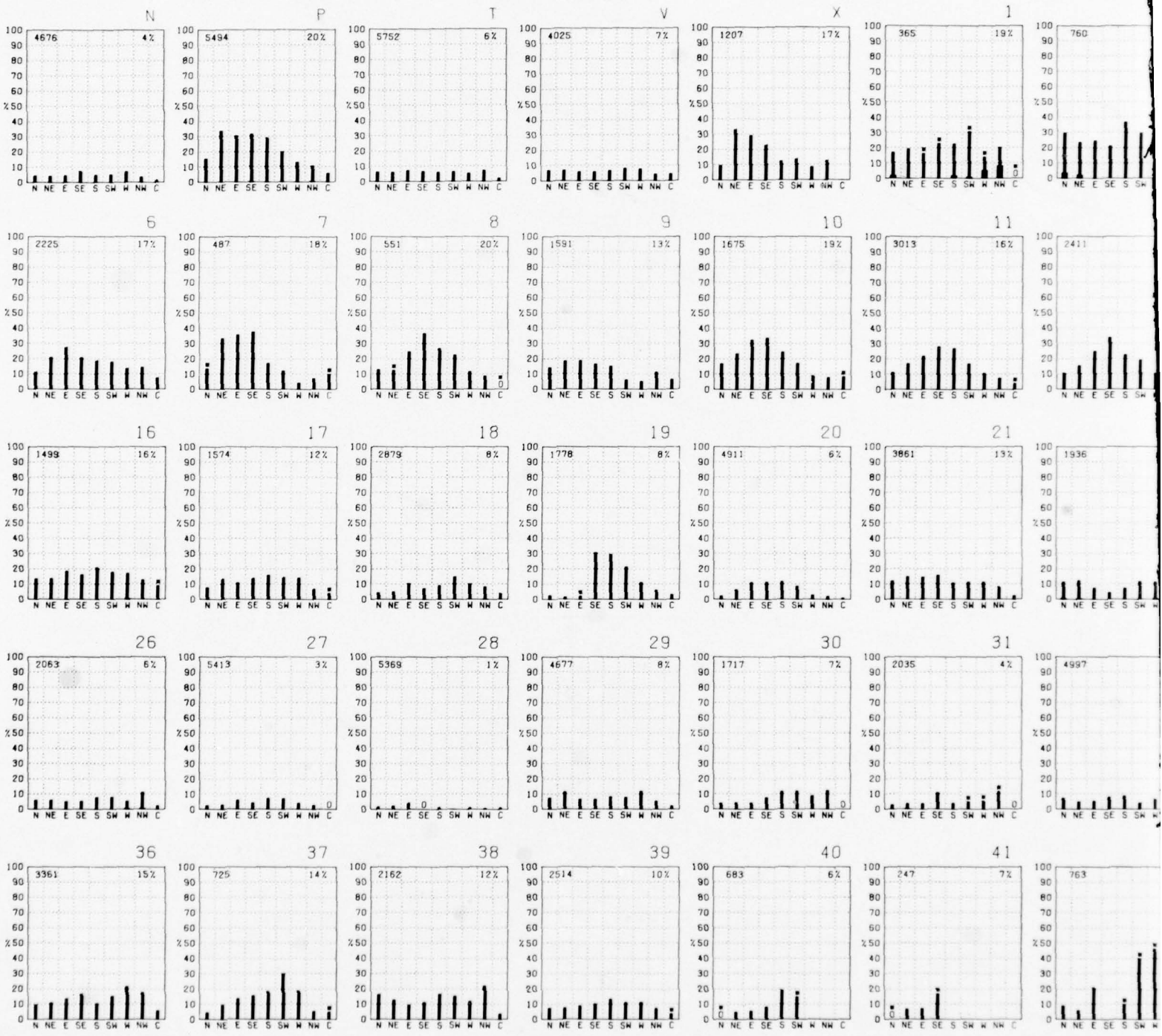
BLUE LINE - Percent frequency of precipitation observations reporting snow

RED LINE - Percent frequency of observations reporting precipitation

PRECIPITATION

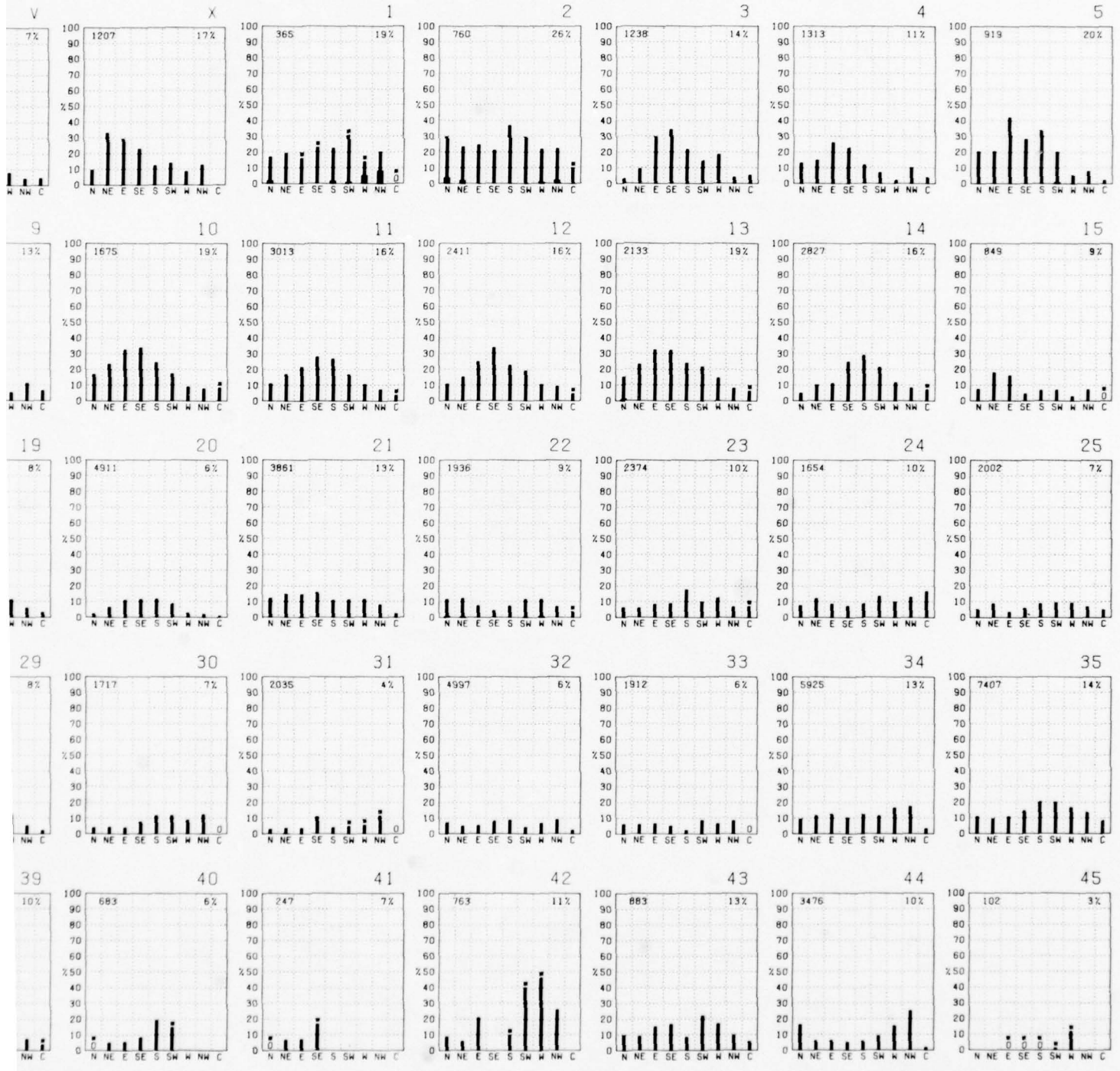


PRECIPITATION



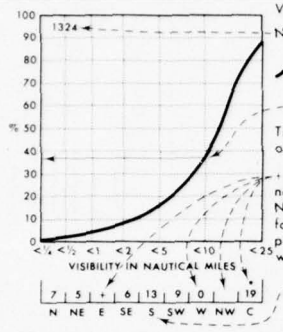
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Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

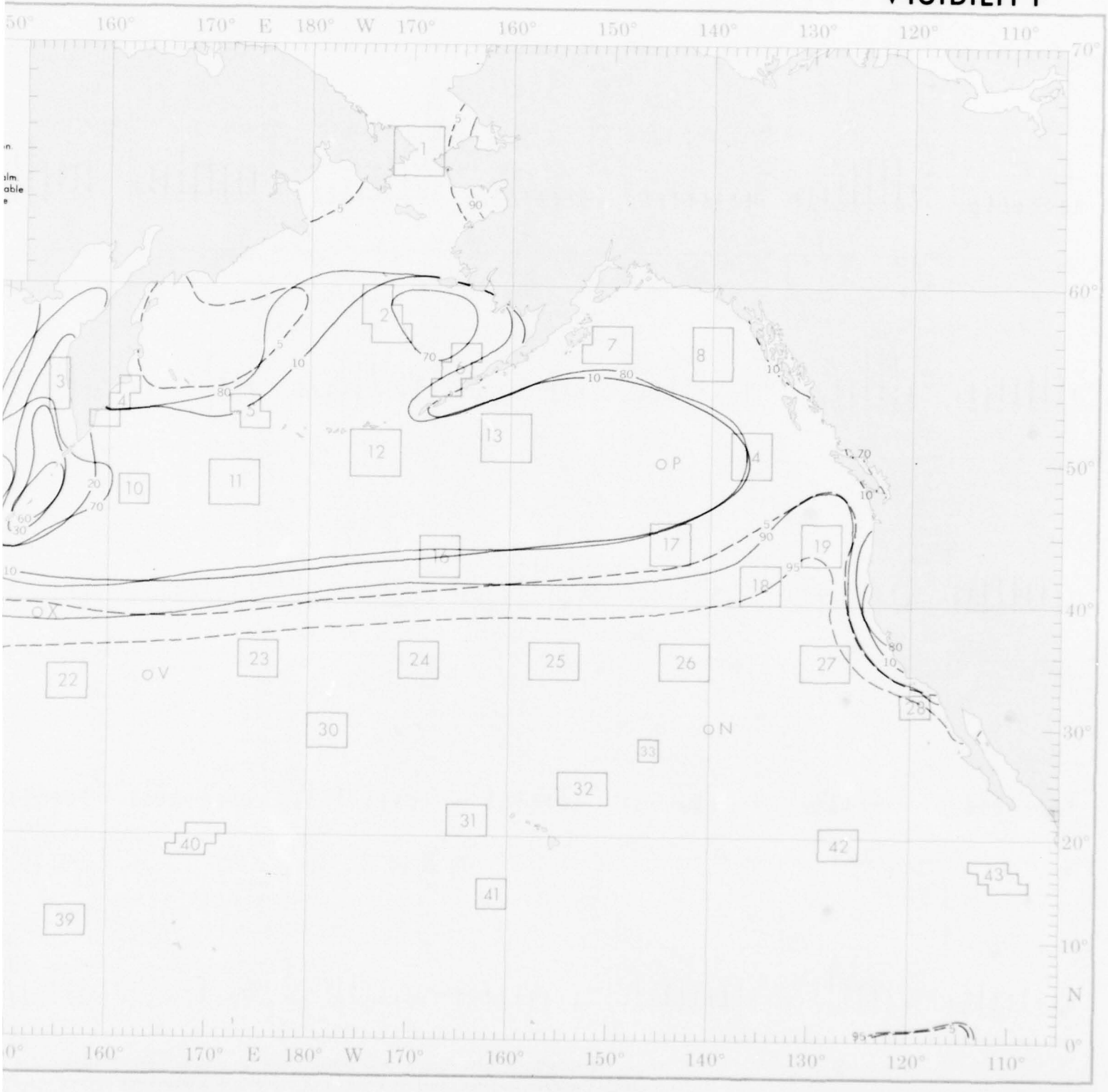
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

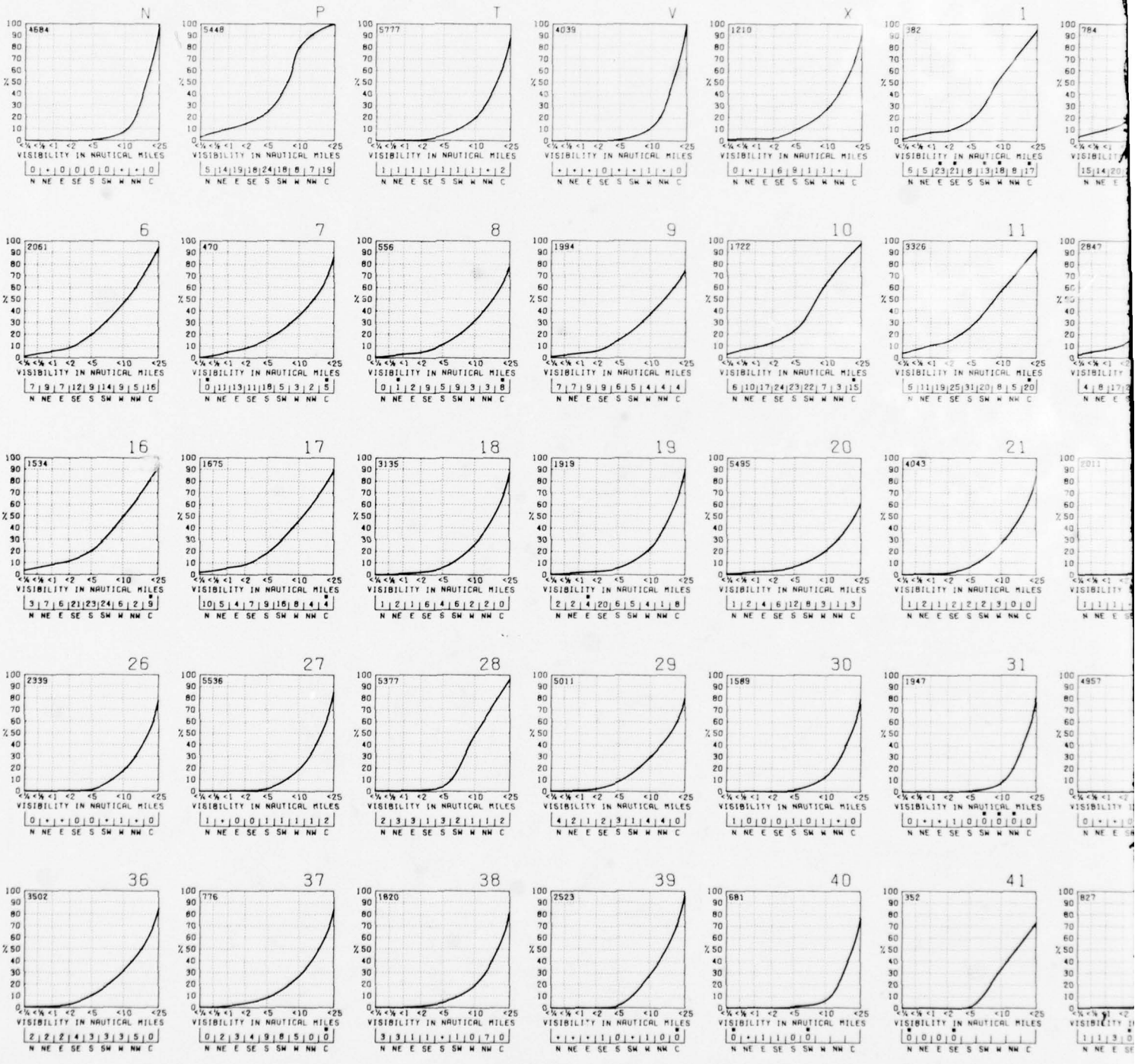
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles

RED LINE - Percent frequency of visibilities <2 nautical miles

VISIBILITY

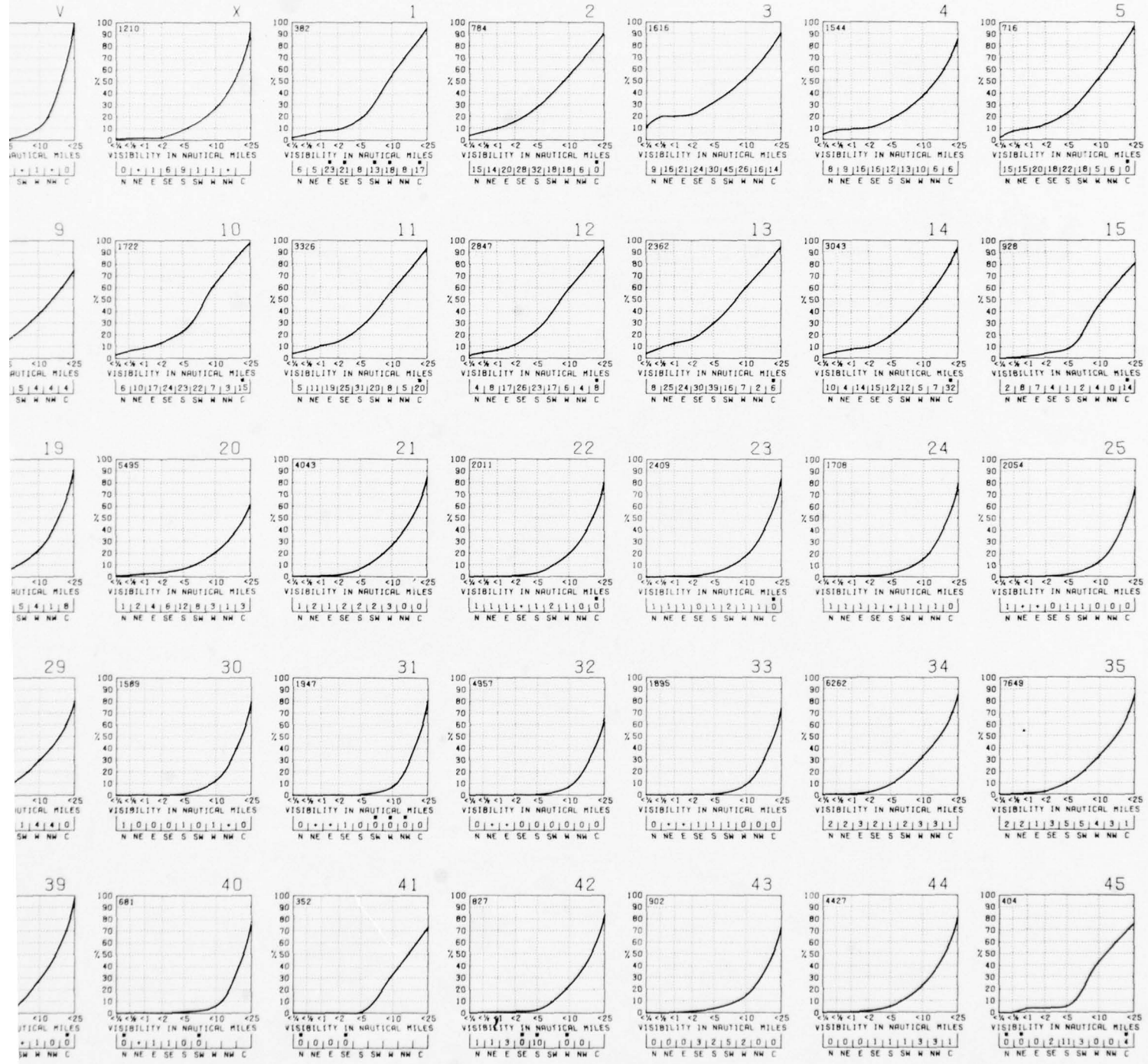

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
1
2
3
4
5
7
8
10
11
12
13
14
16
17
18
19
22
23
24
25
26
27
28
30
31
32
33
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42
43
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90
70
80
10
5
20
60
30
95

VISIBILITY



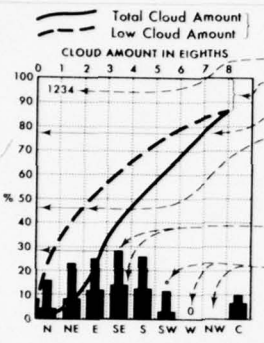
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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 | 5/8 & 6/8 | ≥7/8

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

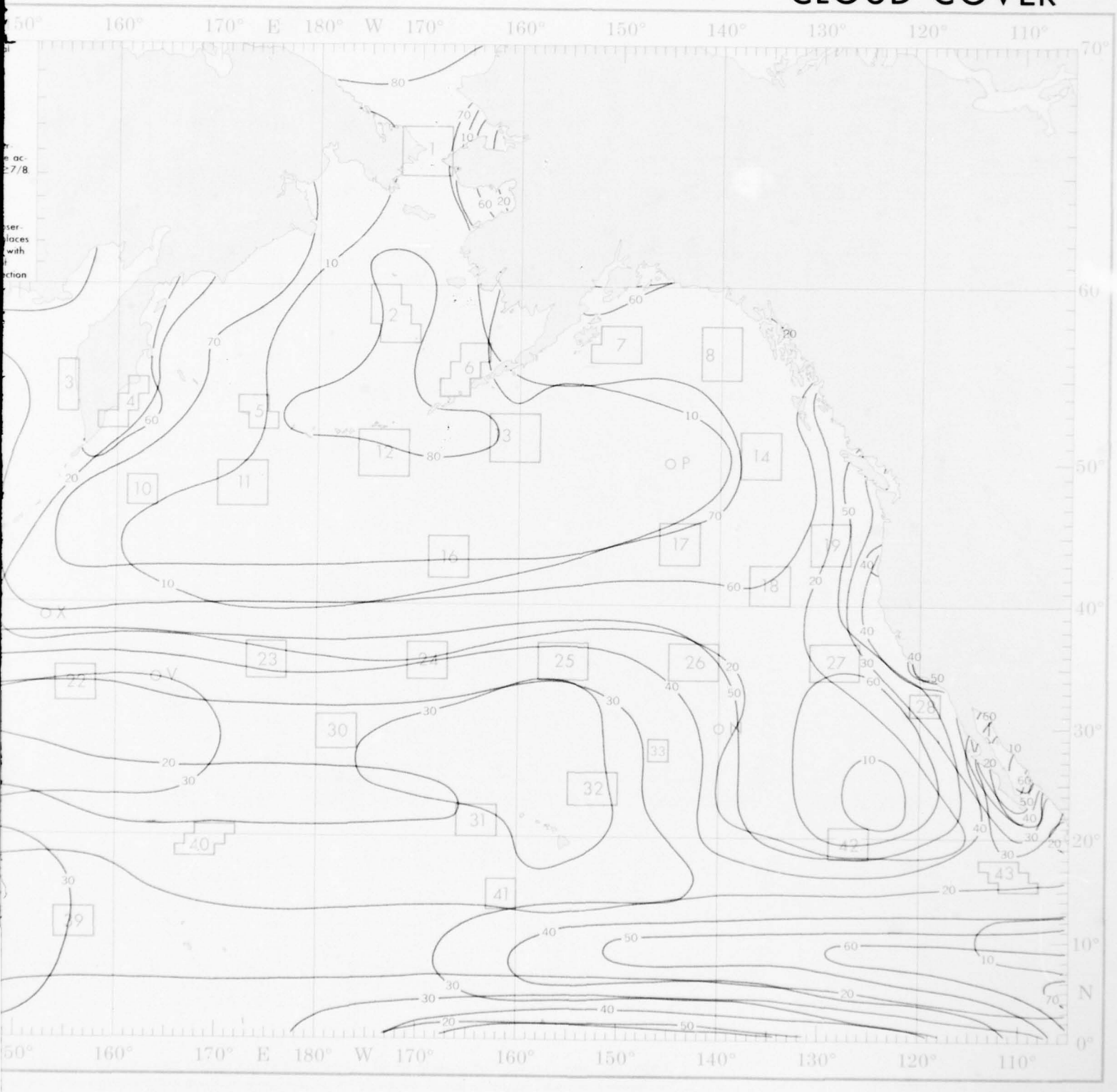
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

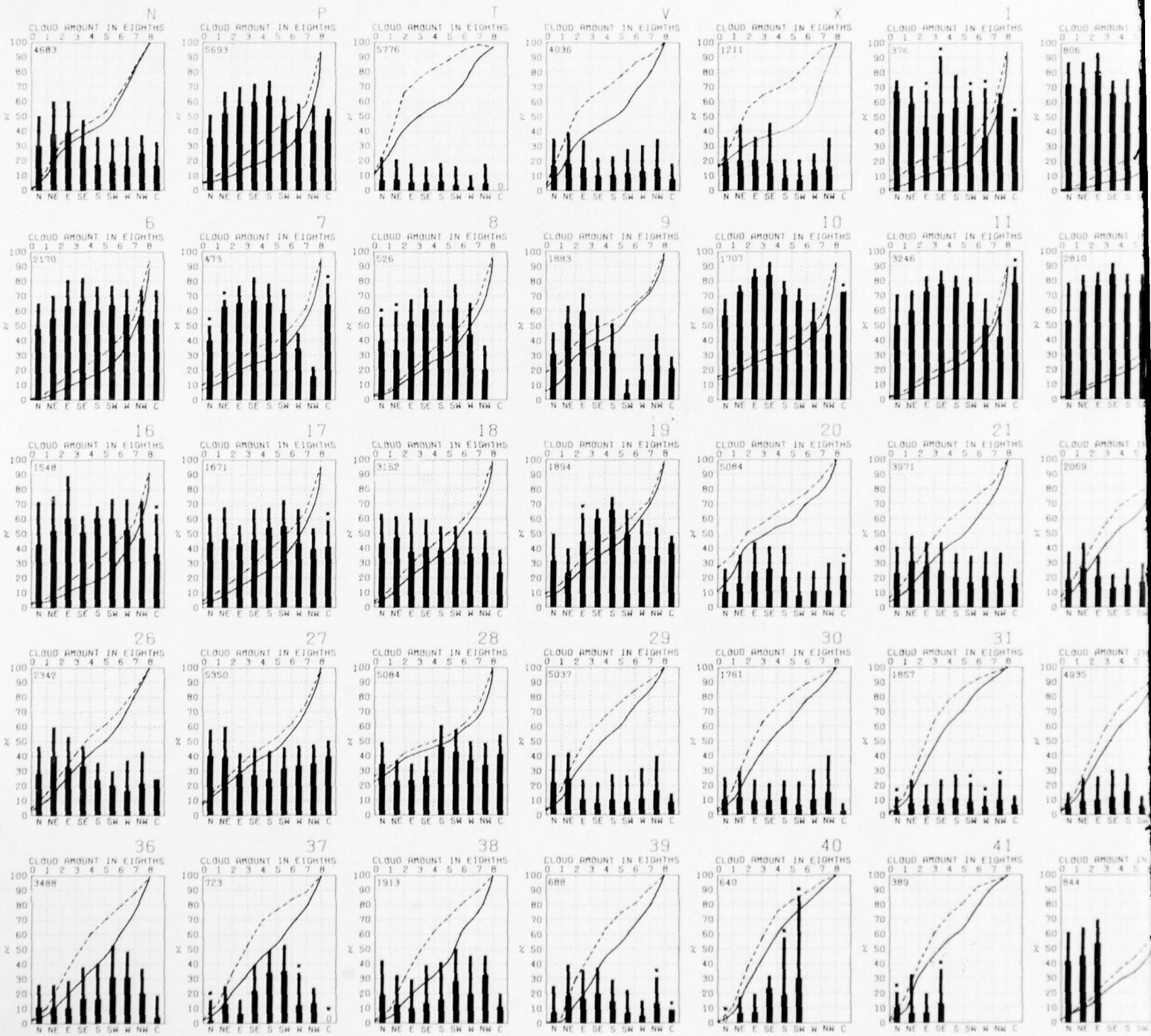
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

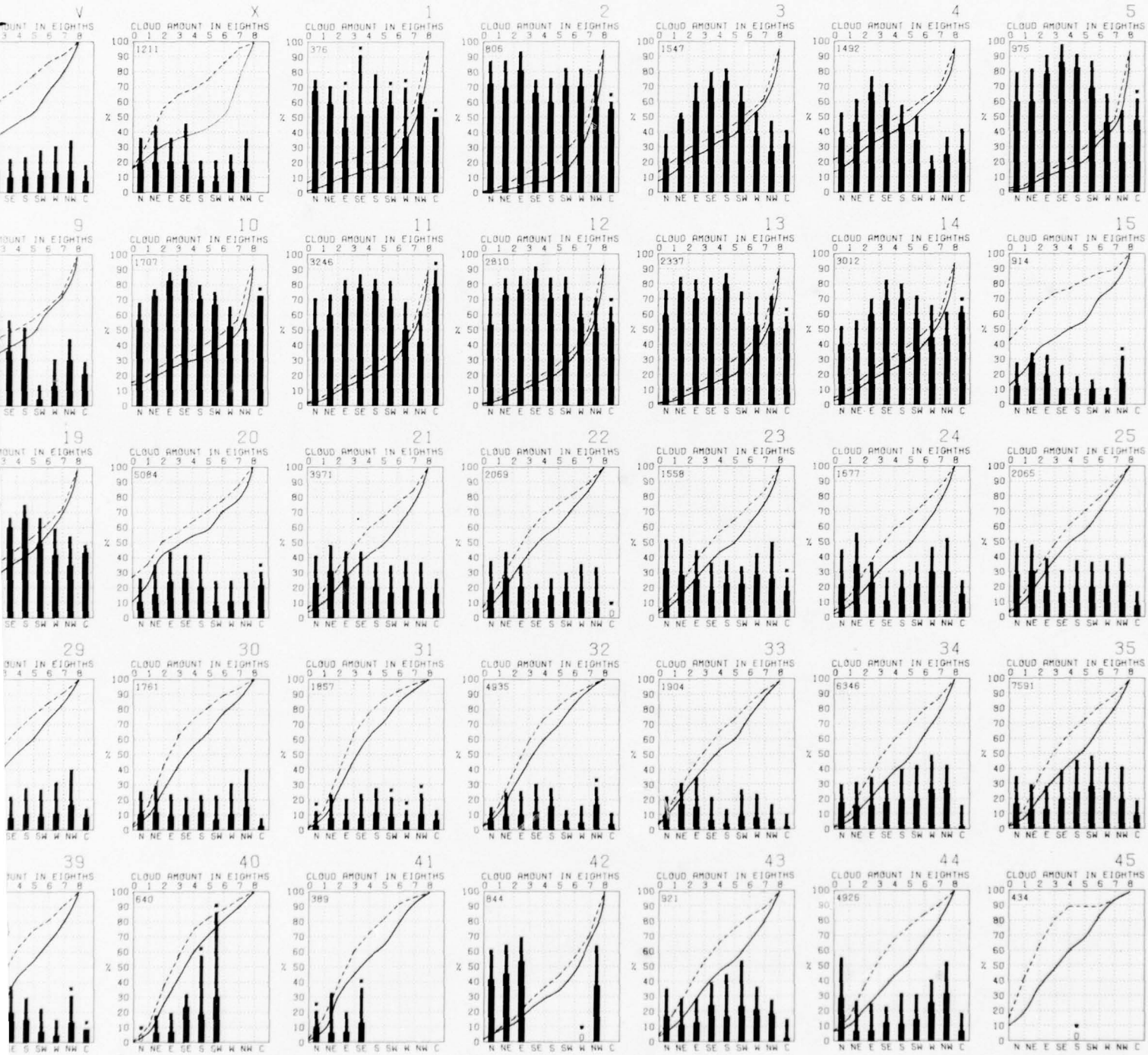

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 9 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 29 30 31 32 33 40 41 42 43
O P O X O Y O Z
80 70 60 50 40 30 20 10

CLOUD COVER



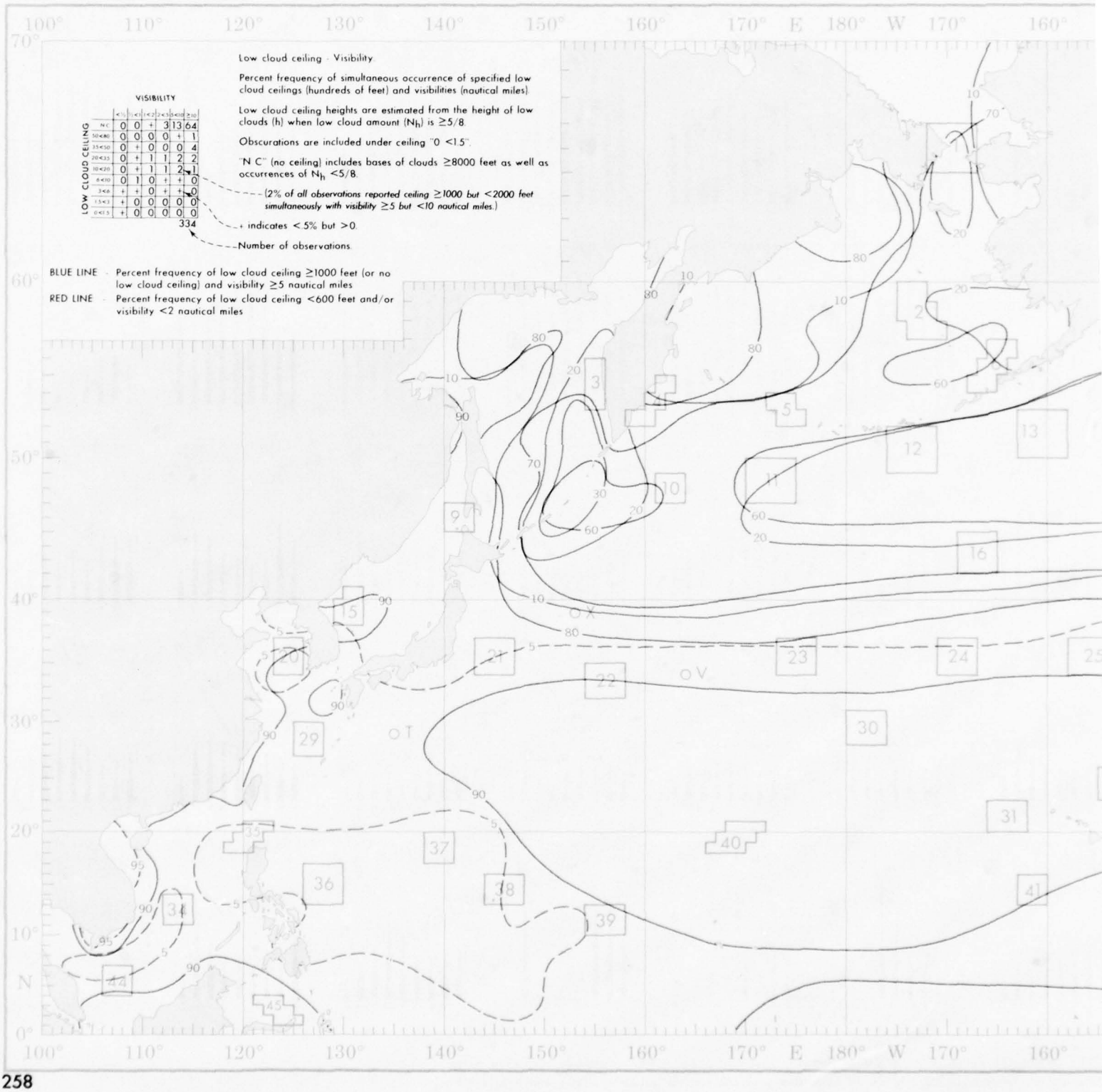
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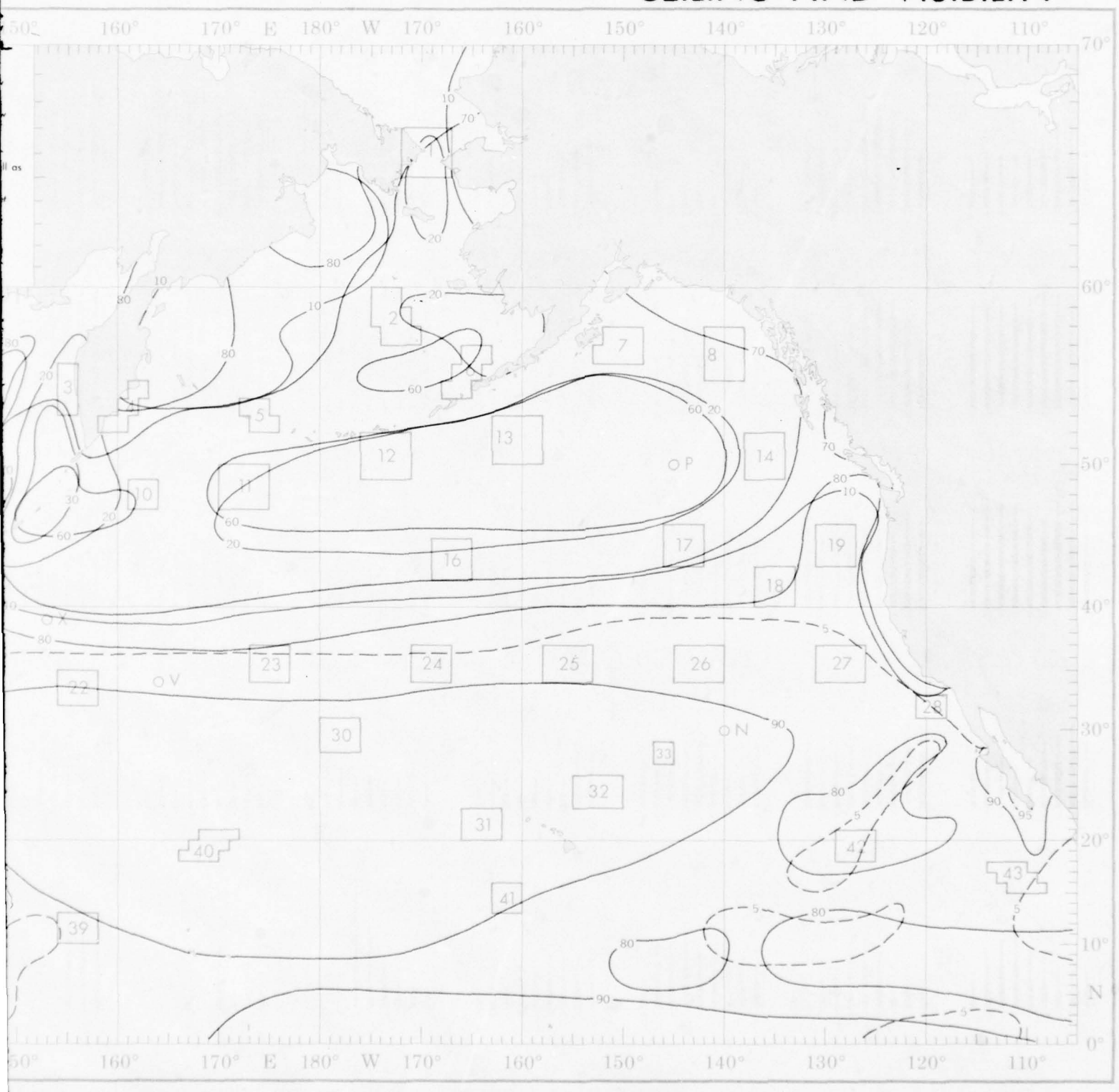
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LOW CLOUD CEILING	<1/2	1/2-<1	1-<2	2-<5	5-<10	≥10
N C	0	0	+	3	13	64
50-<80	0	0	0	0	+	1
35-<50	0	+	0	0	0	4
20-<35	0	+	1	1	2	2
10-<20	0	+	1	1	2	1
6-<10	0	1	0	+	+	0
3-<6	+	+	0	+	+	0
1.5-<3	+	0	0	0	0	0
0-<1.5	+	0	0	0	0	0

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	2	44
50<80	0	0	0	0	*	1
35<50	0	0	0	0	1	4
20<35	0	0	0	*	4	38
10<20	0	0	0	*	1	4
6<10	0	0	0	*	0	*
3<6	0	*	0	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	*	0	0

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LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	1	19	10
50<80	0	0	0	*	1	*
35<50	0	0	0	*	1	1
20<35	*	0	*	*	11	4
10<20	*	*	1	3	18	3
6<10	*	1	1	3	3	1
3<6	1	2	2	3	1	*
1.5<3	1	*	*	*	*	*
0<1.5	5	*	*	*	*	*

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LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	8	74
50<80	0	0	0	0	0	*
35<50	0	0	0	*	*	*
20<35	0	*	*	*	2	5
10<20	*	*	*	2	3	3
6<10	*	0	*	*	0	0
3<6	0	0	0	0	0	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

3607

V

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	*	6	64
50<80	0	0	0	0	*	*
35<50	0	0	0	0	*	*
20<35	*	0	0	*	2	18
10<20	0	*	*	*	2	6
6<10	0	0	*	*	*	*
3<6	0	0	*	*	*	*
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

4035

X

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	2	8	58
50<80	0	0	0	*	*	1
35<50	0	0	0	0	*	2
20<35	0	0	*	1	2	11
10<20	0	0	*	3	5	3
6<10	0	0	0	1	*	*
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	0	0	0

970

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	0	0	7	22
50<80	0	0	0	*	*	*
35<50	*	0	0	0	2	1
20<35	0	*	0	1	6	9
10<20	0	1	1	3	14	9
6<10	0	1	1	*	5	2
3<6	*	*	*	2	4	1
1.5<3	0	0	0	0	1	0
0<1.5	4	1	1	0	*	0

343

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	4	20
50<80	0	0	0	*	*	*
35<50	*	0	*	*	1	*
20<35	0	0	*	*	3	7
10<20	*	*	1	4	8	17
6<10	*	*	1	3	8	6
3<6	*	*	*	2	1	2
1.5<3	0	0	*	*	*	*
0<1.5	3	1	1	2	1	*

1917

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	35
50<80	0	0	0	*	0	*	2
35<50	0	0	0	0	2	4
20<35	0	*	0	*	3	8
10<20	0	1	0	1	4	9
6<10	*	*	*	2	4	9
3<6	0	0	1	1	1	2
1.5<3	*	*	0	*	1	*
0<1.5	1	2	2	1	1	*

370

8

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	33
50<80	*	0	0	0	0	1
35<50	0	0	0	0	0	4
20<35	0	0	0	0	3	7
10<20	0	0	0	2	6	15
6<10	0	0	*	1	4	8
3<6	*	*	0	1	3	3
1.5<3	0	0	*	*	0	1
0<1.5	1	1	1	1	1	1

416

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	7	44
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	3
20<35	0	0	*	1	7	10
10<20	0	*	*	2	4	7
6<10	*	0	0	1	1	1
3<6	0	0	0	1	*	1
1.5<3	0	0	0	*	*	*
0<1.5	*	*	*	1	1	*

696

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	20
50<80	0	0	*	0	1	1
35<50	0	0	0	*	1	1
20<35	0	0	*	1	8	7
10<20	*	*	1	3	15	6
6<10	*	*	1	3	6	1
3<6	1	1	1	2	1	1
1.5<3	*	*	*	*	0	*
0<1.5	5	1	1	*	*	*

1546

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	6	20
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	1
20<35	0	0	*	2	3	5
10<20	*	*	1	4	10	13
6<10	*	*	*	3	7	5
3<6	*	*	*	1	2	1
1.5<3	0	*	*	1	*	*
0<1.5	6	2	1	1	1	*

2378

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	1	6	21
50<80	0	0	0	0	1	3
35<50	0	0	0	*	2	2
20<35	0	0	*	1	6	6
10<20	*	*	*	2	6	12
6<10	0	*	1	2	5	6
3<6	*	*	*	1	1	1
1.5<3	*	0	*	*	*	*
0<1.5	6	2	1	1	1	0

1266

17

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	28
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	1
20<35	0	0	*	1	3	6
10<20	*	0	*	3	7	15
6<10	0	*	1	2	4	7
3<6	0	0	1	1	1	1
1.5<3	*	0	*	*	*	*
0<1.5	3	1	1	1	1	*

1088

18

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	3	39
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	1
20<35	*	0	0	*	2	12
10<20	*	0	*	1	4	21
6<10	0	*	*	1	3	6
3<6	0	0	*	1	1	1
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

2309

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	3	43
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	2
20<35	0	0	*	*	2	13
10<20	0	*	*	1	3	17
6<10	0	0	*	*	2	5
3<6	0	*	0	*	1	1
1.5<3	0	0	0	*	*	*
0<1.5	1	1	*	*	*	0

1632

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	11	62
50<80	0	0	0	0	*	1
35<50	0	0	0	*	0	1
20<35	0	0	0	0	2	7
10<20	0	*	0	1	2	6
6<10	*	0	0	1	1	2
3<6	0	*	0	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

781

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	53
50<80	0	0	0	0	*	1
35<50	0	0	*	0	*	1
20<35	0	0	*	*	2	6
10<20	0	*	*	1	4	11
6<10	0	0	*	1	3	5
3<6	*	*	*	1	1	1
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

2978

26

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	51
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	3
20<35	0	0	0	*	1	9
10<20	0	0	0	*	2	18
6<10	0	0	0	*	2	8
3<6	0	0	0	0	*	2
1.5<3	0	0	0	0	*	*
0<1.5	0	*	*	0	*	*

1685

27

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	*	4	42
50<80	0	0	0	*	*	1
35<50	0	0	0	*	*	3
20<35	0	0	0	*	2	13
10<20	0	*	*	*	5	17
6<10	0	0	*	*	2	7
3<6	0	0	*	*	*	1
1.5<3	0	0	0	0	*	*
0<1.5	*	*	*	*	*	*

4206

28

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	20	30
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	0	0	0	*	3	4
10<20	0	0	0	*	12	11
6<10	*	*	*	1	8	4
3<6	0	*	*	1	2	*
1.5<3	*	0	*	*	*	*
0<1.5	*	*	*	*	*	0

4317

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	11	55
50<80	*	0	*	0	*	*
35<50	0	0	*	*	*	1
20<35	0	0	*	*	2	4
10<20	*	*	*	2	4	7
6<10	*	*	*	2	3	3
3<6	*	*	*	*	*	*
1.5<3	0	*	0	*	*	0
0<1.5	*	*	*	*	*	*

2880

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	5	69
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	*	2	5
10<20	*	0	0	*	1	7
6<10	0	*	0	0	1	5
3<6	0	0	*	*	*	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	*	0	0

1164

31

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	75
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	4
10<20	0	0	0	*	1	8
6<10	0	0	0	0	*	3
3<6	0	0	0	0	0	*
1.5<3	0	*	0	*	*	0
0<1.5	0	0	0	0	0	*

1471

36

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	2	9	50
50<80	0	0	0	0	0	*
35<50	0	0	0	*	*	1
20<35	*	0	*	1	2	3
10<20	*	*	*	1	5	8
6<10	*	*	*	2	3	5
3<6	*	*	*	1	1	*
1.5<3	*	0	*	*	*	*
0<1.5	*	*	*	1	*	*

2850

37

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	63
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	1
20<35	0	0	0	0	*	4
10<20	*	*	*	1	3	9
6<10	0	*	1	1	2	3
3<6	*	*	*	1	1	1
1.5<3	0	0	1	*	*	0
0<1.5	0	0	0	0	0	0

531

38

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	7	59
50<80	0	0	0	0	0	*
35<50	0	0	0	0	*	*
20<35	0	0	*	0	2	4
10<20	0	0	*	1	4	10
6<10	0	*	*	1	2	4
3<6	*	0	*	1	1	1
1.5<3	0	0	0	*	0	0
0<1.5	*	*	0	*	*	0

1066

39

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	11	58
50<80	0	0	0	*	1	3
35<50	0	0	0	0	1	1
20<35	0	0	0	*	1	5
10<20	0	0	*	2	2	6
6<10	0	0	0	*	2	2
3<6	0	0	0	0	0	*
1.5<3	0	0	0	0	*	*
0<1.5	0	*	*	0	*	*

413

40

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	76
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	1
20<35	0	0	0	*	*	2
10<20	0	0	0	*	2	10
6<10	0	0	0	0	1	5
3<6	0	0	0	0	0	*
1.5<3	0	0	0	0	*	*
0<1.5	0	0	*	0	*	*

520

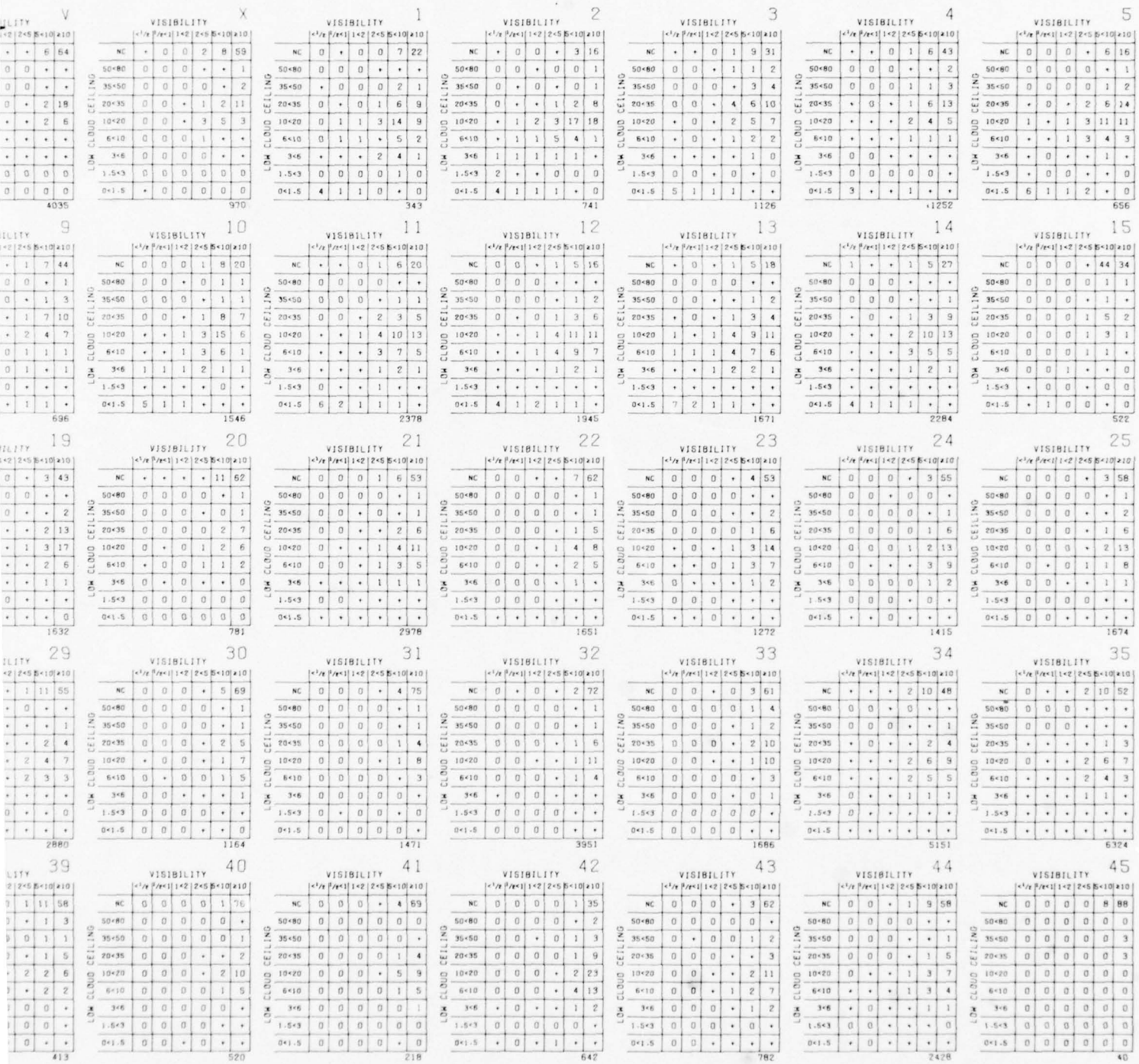
41

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	69
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	*
20<35	0	0	0	0	1	4
10<20	0	0	0	*	5	9
6<10	0	0	0	0	1	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	*	0

218

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

SEPTEMBER



LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	2	8	59
50<80	0	0	0	*	*	1
35<50	0	0	0	0	*	2
20<35	0	0	*	1	2	11
10<20	0	0	*	3	5	3
6<10	0	0	0	1	*	*
3<6	0	0	0	0	*	*
1.5<3	0	0	0	0	0	0
0<1.5	*	0	0	0	0	0

970

X

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	0	7	22
50<80	0	0	0	*	*	*
35<50	*	0	0	0	2	1
20<35	0	*	0	1	6	9
10<20	0	1	1	3	14	9
6<10	0	1	1	*	5	2
3<6	*	*	*	2	4	1
1.5<3	0	0	0	0	1	0
0<1.5	4	1	1	0	*	0

343

1

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	0	*	3	16
50<80	0	0	*	0	0	1
35<50	0	*	0	*	0	1
20<35	0	*	*	1	2	8
10<20	*	1	2	3	17	18
6<10	*	1	1	5	4	1
3<6	1	1	1	1	1	*
1.5<3	2	*	*	0	0	0
0<1.5	4	1	1	1	*	0

741

2

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	9	31
50<80	0	0	*	1	1	2
35<50	0	0	0	*	3	4
20<35	0	0	*	4	6	10
10<20	*	0	*	2	5	7
6<10	*	0	*	1	2	2
3<6	*	*	*	*	1	0
1.5<3	0	0	*	0	*	0
0<1.5	5	1	1	1	*	*

1126

3

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	6	43
50<80	0	0	0	*	*	2
35<50	0	0	0	1	1	3
20<35	*	0	*	1	6	13
10<20	*	0	*	2	4	5
6<10	*	*	*	1	1	1
3<6	0	0	*	*	*	*
1.5<3	0	0	0	0	0	*
0<1.5	3	*	*	1	*	*

1252

4

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	6	16
50<80	0	0	0	0	*	1
35<50	0	0	0	0	1	2
20<35	*	0	*	2	6	14
10<20	1	*	1	3	11	11
6<10	*	*	1	3	4	3
3<6	*	0	*	*	1	*
1.5<3	*	0	0	*	*	0
0<1.5	6	1	1	2	*	0

656

5

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	1	7	44		
50<80	0	0	*	1		
35<50	0	*	1	3		
20<35	*	1	7	10		
10<20	*	2	4	7		
6<10	0	1	1	1		
3<6	0	1	*	1		
1.5<3	0	*	*	*		
0<1.5	*	1	1	*		

696

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	20
50<80	0	0	*	0	1	1
35<50	0	0	0	*	1	1
20<35	0	0	*	1	8	7
10<20	*	*	1	3	15	6
6<10	*	*	1	3	6	1
3<6	1	1	1	2	1	1
1.5<3	*	*	*	*	0	*
0<1.5	5	1	1	*	*	*

1546

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	0	1	6	20
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	1
20<35	0	0	*	2	3	5
10<20	*	*	1	4	10	13
6<10	*	*	*	3	7	5
3<6	*	*	*	1	2	1
1.5<3	0	*	*	1	*	*
0<1.5	6	2	1	1	1	*

2378

11

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	1	5	16
50<80	0	0	0	*	*	*
35<50	0	0	0	*	1	2
20<35	0	0	*	1	3	6
10<20	*	*	1	4	11	11
6<10	*	*	*	4	9	7
3<6	*	*	*	1	2	1
1.5<3	*	*	*	*	*	*
0<1.5	4	1	2	1	1	*

1945

12

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	0	*	1	5	18
50<80	0	0	0	0	*	*
35<50	0	0	0	*	1	2
20<35	*	0	*	1	3	4
10<20	1	*	1	4	9	11
6<10	1	1	1	4	7	6
3<6	*	*	1	2	2	1
1.5<3	*	*	*	*	*	*
0<1.5	7	2	1	1	*	*

1671

13

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	*	*	1	5	27
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	1
20<35	*	0	*	1	3	9
10<20	*	*	*	2	10	13
6<10	*	*	*	3	5	5
3<6	*	*	*	1	2	1
1.5<3	*	*	*	*	*	*
0<1.5	4	1	1	1	*	*

2284

14

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	44	34
50<80	0	0	0	0	1	1
35<50	0	0	0	*	1	*
20<35	0	0	0	1	5	2
10<20	0	0	0	1	3	1
6<10	0	0	0	1	1	*
3<6	0	0	1	*	*	0
1.5<3	*	0	0	*	0	0
0<1.5	*	1	0	0	*	0

522

15

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	3	43		
50<80	0	0	*	*		
35<50	0	*	2			
20<35	*	2	13			
10<20	*	1	3	17		
6<10	*	*	2	6		
3<6	*	*	1	1		
1.5<3	0	*	*	0		
0<1.5	*	*	*	0		

1632

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	*	11	62
50<80	0	0	0	0	*	1
35<50	0	0	0	*	0	1
20<35	0	0	0	0	2	7
10<20	0	*	0	1	2	6
6<10	*	0	0	1	1	2
3<6	0	*	0	*	*	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

781

20

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	53
50<80	0	0	0	0	*	1
35<50	0	0	*	0	*	1
20<35	0	0	*	*	2	6
10<20	0	*	*	1	4	11
6<10	0	0	*	1	3	5
3<6	*	*	*	1	1	1
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

2978

21

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	7	62
50<80	0	0	0	0	*	1
35<50	0	0	0	*	1	5
20<35	0	0	0	*	1	5
10<20	0	*	0	1	4	8
6<10	0	0	*	*	2	5
3<6	0	0	0	*	1	*
1.5<3	0	0	*	*	*	*
0<1.5	*	*	*	*	*	*

1651

22

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	53
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	2
20<35	0	0	0	0	1	6
10<20	*	0	*	1	3	14
6<10	*	*	0	1	3	7
3<6	0	*	*	*	1	2
1.5<3	0	0	0	*	*	*
0<1.5	*	*	0	*	*	*

1272

23

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	55
50<80	0	0	*	0	0	*
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	6
10<20	0	0	0	1	2	13
6<10	0	*	*	*	3	9
3<6	0	0	0	0	1	2
1.5<3	0	0	0	*	0	*
0<1.5	*	*	0	*	*	*

1415

24

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	58
50<80	0	0	0	0	*	1
35<50	0	0	0	*	*	2
20<35	0	0	0	*	1	6
10<20	0	0	0	*	2	13
6<10	0	*	0	1	1	8
3<6	0	0	*	*	1	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	*	*	*	*

1674

25

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	1	11	55		
50<80	*	0	*	*		
35<50	*	*	1			
20<35	*	*	2	4		
10<20	*	2	4	7		
6<10	*	2	3	3		
3<6	*	*	*	*		
1.5<3	0	*	*	0		
0<1.5	*	*	*	*		

2880

29

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	5	69
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	*	2	5
10<20	*	0	0	*	1	7
6<10	0	*	0	0	1	5
3<6	0	0	*	*	*	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	*	*	0

1164

30

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	75
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	0	1	4
10<20	0	0	0	*	1	8
6<10	0	0	0	0	*	3
3<6	0	0	0	0	0	*
1.5<3	0	*	0	0	*	0
0<1.5	0	0	0	0	*	*

1471

31

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	2	72
50<80	0	0	0	0	*	1
35<50	0	0	0	0	*	1
20<35	0	0	0	*	1	6
10<20	0	0	0	*	1	11
6<10	0	0	0	*	1	4
3<6	*	0	0	*	*	*
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	*	*

3951

32

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	*	0	3	61
50<80	0	0	0	0	1	4
35<50	0	0	0	*	1	2
20<35	0	0	0	*	2	10
10<20	0	0	*	*	1	10
6<10	0	0	0	0	*	3
3<6	0	0	0	*	0	1
1.5<3	0	0	0	0	*	*
0<1.5	0	0	0	0	*	*

1686

33

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	*	*	2	10	48
50<80	0	0	*	0	*	*
35<50	0	0	0	*	*	1
20<35	*	0	*	*	2	4
10<20	*	*	*	2	6	9
6<10	*	*	*	2	5	5
3<6	0	*	*	1	1	1
1.5<3	0	*	*	*	*	*
0<1.5	*	*	*	*	*	*

5151

34

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	*	*	2	10	52
50<80	0	0	0	*	*	*
35<50	0	0	0	*	*	*
20<35	*	*	*	*	*	3
10<20	0	*	*	2	6	7
6<10	*	*	*	2	4	3
3<6	*	*	*	1	1	*
1.5<3	*	*	*	*	*	*
0<1.5	*	*	*	*	*	*

6324

35

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	*	1	11	58		
50<80	0	*	1	3		
35<50	0	0	1	5		
20<35	*	2	2	6		
10<20	*	*	2	2		
6<10	0	0	0	*		
3<6	0	0	*	*		
1.5<3	0	0	0	0		
0<1.5	0	0	*	*		

413

39

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	76
50<80	0	0	0	0	0	*
35<50	0	0	0	0	0	1
20<35	0	0	0	*	*	2
10<20	0	0	0	*	2	10
6<10	0	0	0	0	1	5
3<6	0	0	0	0	0	*
1.5<3	0	0	0	0	*	*
0<1.5	0	0	*	0	*	*

520

40

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	4	69
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	*
20<35	0	0	0	0	1	4
10<20	0	0	0	*	5	9
6<10	0	0	0	0	1	5
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	*	0

218

41

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	1	35
50<80	0	0	0	0	*	2
35<50	0	0	*	0	1	3
20<35	0	0	0	*	*	9
10<20	0	0	0	*	2	23
6<10	0	0	0	*	4	13
3<6	*	0	*	*	1	2
1.5<3	0	0	0	0	0	*
0<1.5	*	0	*	1	*	*

642

42

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	3	62
50<80	0	0	0	0	0	*
35<50	0	*	0	0	1	2
20<35	0	0	0	*	*	3
10<20	0	0	*	*	2	11
6<10	0	0	*	1	2	7
3<6	0	0	0	*	1	2
1.5<3	0	0	0	*	0	*
0<1.5	0	0	*	*	*	*

782

43

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	*	9	58
50<80	0	0	0	0	*	*
35<50	0	0	0	*	*	1
20<35	0	0	0	*	1	5
10<20	0	*	*	1	3	7
6<10	*	*	*	1	3	4
3<6	*	0	*	*	1	1
1.5<3	0	0	*	*	*	0
0<1.5	*	0	*	*	*	*

2428

44

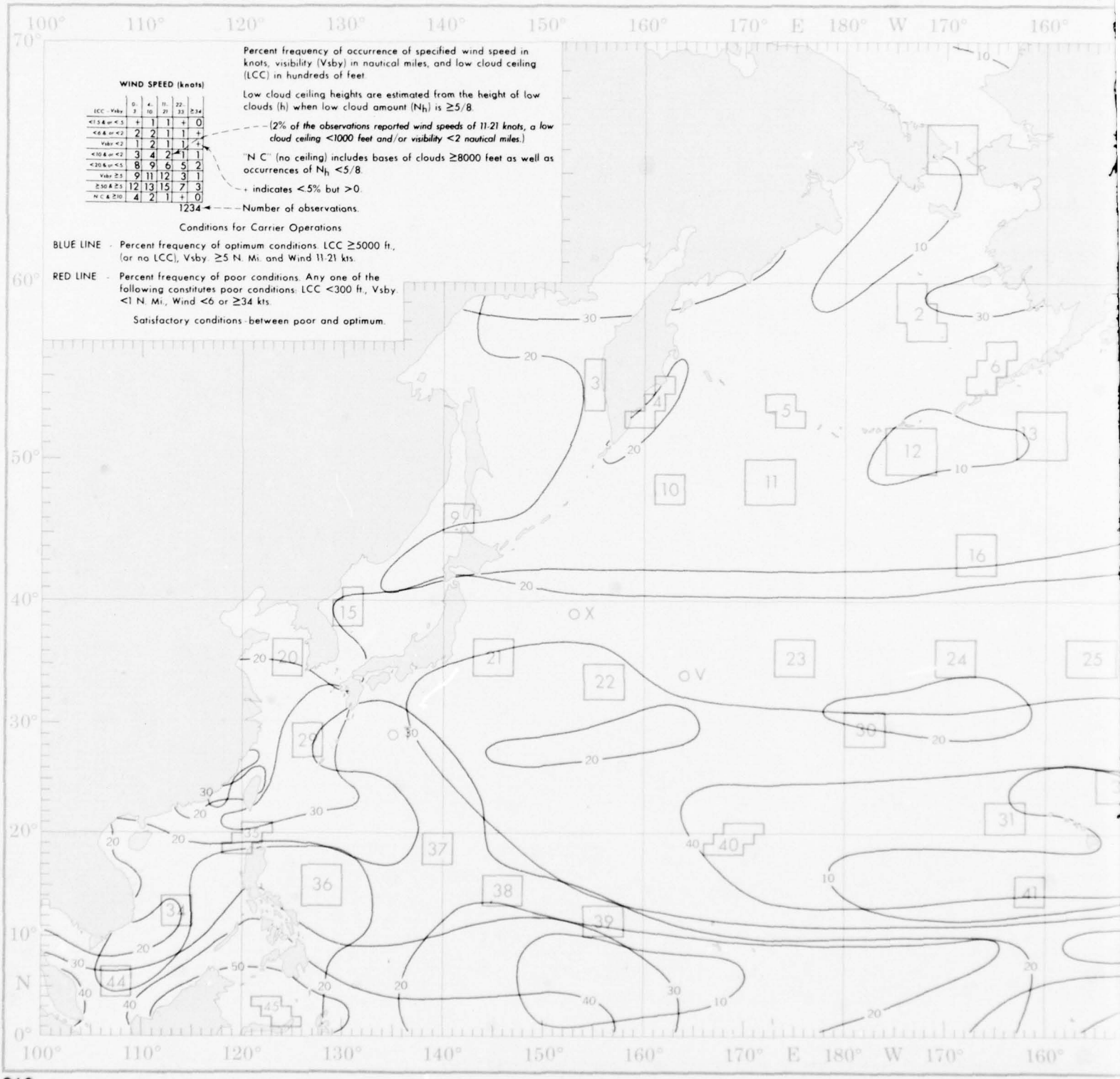
LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	88
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	3
20<35	0	0	0	0	0	3
10<20	0	0	0	0	0	0
6<10	0	0	0	0	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

40

45

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER



Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <.5% but >0.

1234 ← Number of observations.

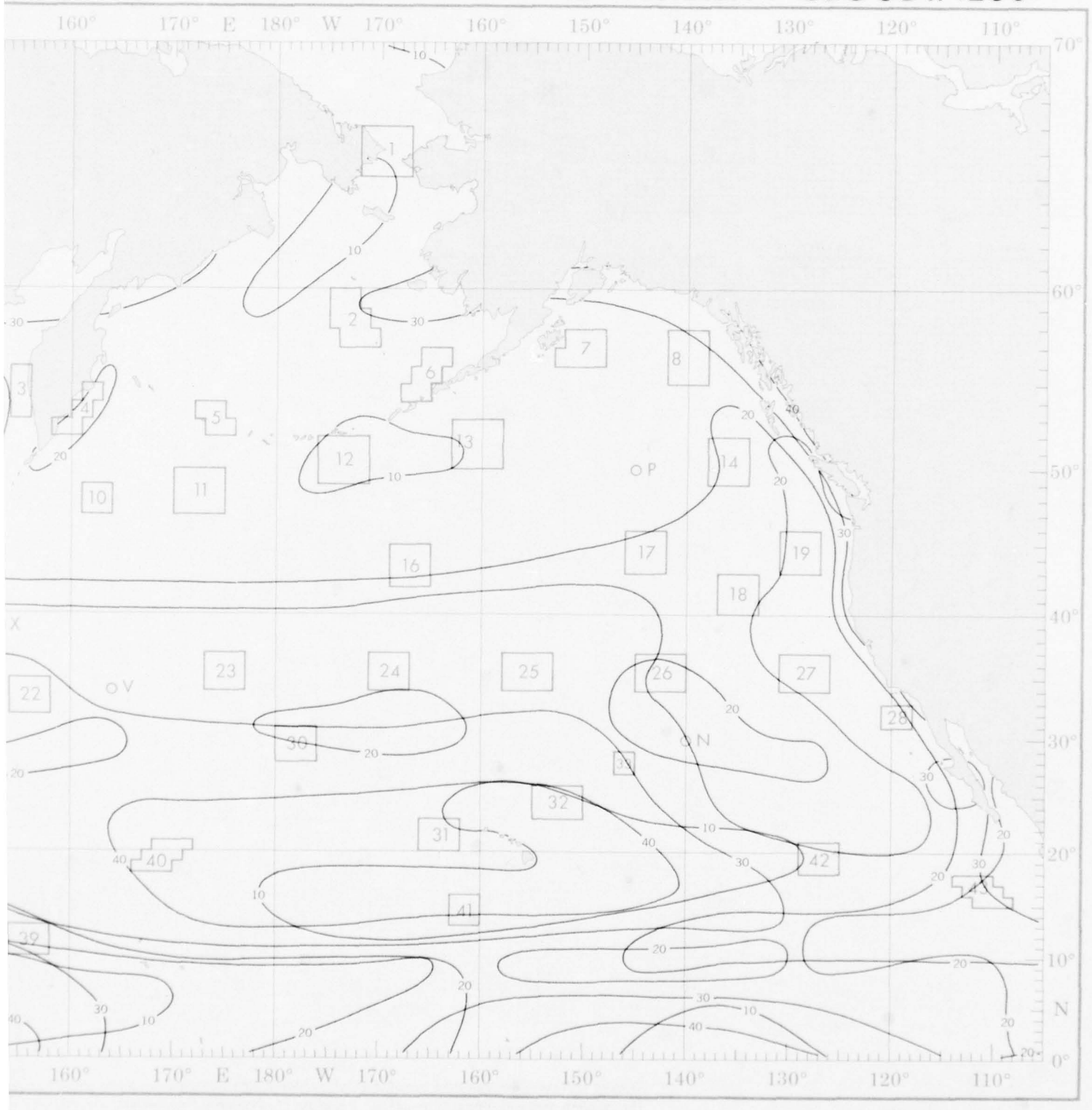
Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.

Satisfactory conditions - between poor and optimum.

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	0	+	+	+	0
<20 & OR <5	1	2	2	+	+
VSBY ≥5	10	42	45	3	+
≥50 & ≥5	7	23	17	1	0
NC & ≥10	6	22	16	1	0

4675

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	4	2	+
<6 & OR <2	1	3	9	6	1
VSBY <2	+	2	6	5	1
<10 & OR <2	1	4	11	9	1
<20 & OR <5	1	7	23	17	4
VSBY ≥5	2	14	35	21	4
≥50 & ≥5	1	7	14	7	1
NC & ≥10	+	3	5	2	1

5423

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	+	0	+	+	+
VSBY <2	+	0	+	+	+
<10 & OR <2	+	0	+	+	+
<20 & OR <5	+	2	5	2	1
VSBY ≥5	7	35	47	6	+
≥50 & ≥5	6	31	40	4	+
NC & ≥10	6	29	36	3	+

3605

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	+	+	+
VSBY <2	0	0	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	4	3	1
VSBY ≥5	5	38	46	10	1
≥50 & ≥5	4	30	31	5	+
NC & ≥10	4	27	28	4	+

4021

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	+	0	0
<6 & OR <2	+	0	+	+	0
VSBY <2	+	0	+	+	0
<10 & OR <2	+	0	1	1	+
<20 & OR <5	+	2	7	6	1
VSBY ≥5	4	19	47	20	3
≥50 & ≥5	3	15	36	12	1
NC & ≥10	3	14	32	9	1

970

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	3	+	0
<6 & OR <2	2	5	9	2	0
VSBY <2	2	4	4	1	0
<10 & OR <2	2	7	10	4	1
<20 & OR <5	3	13	22	11	3
VSBY ≥5	5	24	35	16	2
≥50 & ≥5	3	12	12	4	0
NC & ≥10	2	8	8	3	0

330

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	4	2	+
<6 & OR <2	1	4	7	4	1
VSBY <2	+	2	4	2	+
<10 & OR <2	1	8	15	8	2
<20 & OR <5	2	17	29	13	2
VSBY ≥5	3	23	38	14	1
≥50 & ≥5	1	8	12	3	+
NC & ≥10	1	7	10	3	+

1910

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	1	2	1
<6 & OR <2	1	3	4	4	2
VSBY <2	1	1	2	1	2
<10 & OR <2	2	8	8	6	5
<20 & OR <5	4	10	15	10	5
VSBY ≥5	6	20	43	15	3
≥50 & ≥5	1	9	23	5	1
NC & ≥10	1	8	20	5	1

367

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	4	1	+
<6 & OR <2	1	2	9	2	+
VSBY <2	+	1	2	1	0
<10 & OR <2	1	5	16	5	1
<20 & OR <5	1	13	26	9	2
VSBY ≥5	5	31	40	11	2
≥50 & ≥5	3	16	14	3	+
NC & ≥10	3	14	13	3	+

410

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	1	2	2	2	+
VSBY <2	+	+	1	+	+
<10 & OR <2	1	2	3	2	+
<20 & OR <5	1	6	10	4	+
VSBY ≥5	10	36	34	10	2
≥50 & ≥5	7	24	20	4	+
NC & ≥10	7	21	16	4	+

525

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	1	1
<6 & OR <2	1	4	7	3	2
VSBY <2	+	3	5	2	2
<10 & OR <2	1	7	11	6	3
<20 & OR <5	2	13	22	13	4
VSBY ≥5	4	21	35	16	1
≥50 & ≥5	2	10	13	5	0
NC & ≥10	1	7	9	2	0

1543

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	6	4	1
<6 & OR <2	1	3	8	6	2
VSBY <2	+	2	5	4	1
<10 & OR <2	1	8	14	9	2
<20 & OR <5	2	16	28	15	3
VSBY ≥5	3	25	34	12	1
≥50 & ≥5	1	9	13	3	+
NC & ≥10	+	7	10	2	+

2358

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	6	1	+
<6 & OR <2	1	5	8	3	1
VSBY <2	1	3	6	2	1
<10 & OR <2	1	6	14	7	1
<20 & OR <5	1	11	25	12	2
VSBY ≥5	3	21	37	16	2
≥50 & ≥5	2	10	15	5	1
NC & ≥10	1	7	10	3	+

1262

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	1	0
<6 & OR <2	+	4	6	2	+
VSBY <2	+	2	4	1	+
<10 & OR <2	+	7	14	4	1
<20 & OR <5	2	13	28	9	1
VSBY ≥5	3	26	41	11	2
≥50 & ≥5	1	12	17	4	+
NC & ≥10	1	11	14	2	+

1086

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	+	2	3	1	0
VSBY <2	+	1	1	+	0
<10 & OR <2	+	5	7	2	+
<20 & OR <5	1	15	21	5	+
VSBY ≥5	5	37	44	8	+
≥50 & ≥5	3	19	18	3	+
NC & ≥10	3	17	17	2	+

2285

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	0
<6 & OR <2	1	2	2	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	1	4	7	2	+
<20 & OR <5	2	11	17	5	+
VSBY ≥5	7	29	48	11	+
≥50 & ≥5	4	15	22	4	+
NC & ≥10	4	14	20	4	+

1624

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	1	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	2	2	1	1
<20 & OR <5	1	6	6	1	1
VSBY ≥5	9	43	39	4	1
≥50 & ≥5	8	35	29	3	+
NC & ≥10	6	28	25	3	+

779

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	6	3	1
<20 & OR <5	1	8	15	7	1
VSBY ≥5	3	31	47	13	1
≥50 & ≥5	2	22	30	6	+
NC & ≥10	2	20	26	5	+

2970

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	1	+	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	4	6	1	+
<20 & OR <5	2	12	16	2	+
VSBY ≥5	9	44	41	4	+
≥50 & ≥5	7	27	20	2	+
NC & ≥10	6	25	18	1	+

1676

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	1	2	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	4	7	2	+
<20 & OR <5	2	10	19	5	+
VSBY ≥5	6	32	48	12	1
≥50 & ≥5	3	17	22	5	+
NC & ≥10	3	15	19	5	+

4196

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	2	2	+	0
VSBY <2	+	+	+	0	0
<10 & OR <2	1	8	9	1	0
<20 & OR <5	3	19	18	1	0
VSBY ≥5	6	39	47	4	+
≥50 & ≥5	3	18	27	3	+
NC & ≥10	2	10	16	1	0

4285

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	+	2	1	1
VSBY <2	+	+	1	+	1
<10 & OR <2	+	2	5	3	2
<20 & OR <5	1	6	12	6	3
VSBY ≥5	6	34	41	10	1
≥50 & ≥5	5	28	28	5	+
NC & ≥10	5	24	23	4	+

2867

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	0	0
<10 & OR <2	+	3	4	1	+
<20 & OR <5	1	6	8	2	+
VSBY ≥5	7	46	40	5	+
≥50 & ≥5	6	38	28	3	+
NC & ≥10	5	35	26	3	+

1157

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	+	+	+	0	0
<10 & OR <2	+	1	2	+	+
<20 & OR <5	1	4	8	1	+
VSBY ≥5	5	34	57	4	+
≥50 & ≥5	4	28	45	3	0
NC & ≥10	4	27	42	2	0

1461

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	3	1	+
VSBY <2	+	1	1	0	0
<10 & OR <2	1	5	8	2	+
<20 & OR <5	2	12	15	4	+
VSBY ≥5	9	46	29	5	+
≥50 & ≥5	7	34	17	2	+
NC & ≥10	6	29	13	2	0

2834

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	2	2	2	1
VSBY <2	0	+	1	1	1
<10 & OR <2	0	3	5	3	2
<20 & OR <5	+	7	11	5	2
VSBY ≥5	8	45	34	5	1
≥50 & ≥5	8	37	23	2	+
NC & ≥10	7	33	21	2	+

528

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	3	1	+	+
VSBY <2	0	1	+	+	0
<10 & OR <2	1	6	4	1	+
<20 & OR <5	2	13	10	2	+
VSBY ≥5	11	46	34	4	+
≥50 & ≥5	9	33	22	2	0
NC & ≥10	9	29	20	2	0

1059

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	4	3	0	0
<20 & OR <5	1	8	9	0	0
VSBY ≥5	14	58	23	+	+
≥50 & ≥5	13	46	13	+	0
NC & ≥10	11	36	10	+	0

413

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	3	3	0	0
<20 & OR <5	+	9	11	0	+
VSBY ≥5	2	44	52	1	+
≥50 & ≥5	2	34	40	1	0
NC & ≥10	2	34	39	1	0

516

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	6	0	0
<20 & OR <5	0	4	16	1	1
VSBY ≥5	2	26	66	4	1
≥50 & ≥5	2	21	49	3	0
NC & ≥10	2	19	47	3	0

202

Graphs represent the objective compilation of available data for specified areas without regard to suspe
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

TY-WIND

SEPTEMBER

V

EED (KNOTS)			
4-10	11-21	22-33	≥34
0	+	0	0
0	+	+	+
0	+	+	+
+	+	+	+
2	4	3	1
38	46	10	1
30	31	5	+
27	28	4	+

4021

X

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	+	0	0
<6 & OR <2	+	0	+	+	0
VSBY <2	+	0	+	+	0
<10 & OR <2	+	0	1	1	+
<20 & OR <5	+	2	7	6	1
VSBY ≥5	4	19	47	20	3
≥50 & ≥5	3	15	36	12	1
NC & ≥10	3	14	32	9	1

970

1

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	3	+	0
<6 & OR <2	2	5	9	2	0
VSBY <2	2	4	4	1	0
<10 & OR <2	2	7	10	4	1
<20 & OR <5	3	13	22	11	3
VSBY ≥5	5	24	35	16	2
≥50 & ≥5	3	12	12	4	0
NC & ≥10	2	8	8	3	0

330

2

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	5	1	1
<6 & OR <2	1	4	9	3	4
VSBY <2	1	3	8	2	3
<10 & OR <2	1	6	12	7	4
<20 & OR <5	4	16	28	17	5
VSBY ≥5	5	18	32	15	1
≥50 & ≥5	2	5	10	3	0
NC & ≥10	2	4	8	2	0

689

3

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	2	3	2	+	1
<6 & OR <2	2	3	3	1	1
VSBY <2	2	3	2	1	1
<10 & OR <2	3	5	5	2	1
<20 & OR <5	4	9	13	5	1
VSBY ≥5	14	30	30	7	1
≥50 & ≥5	10	17	14	3	+
NC & ≥10	8	12	10	1	0

981

4

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	3	1	+
<6 & OR <2	1	2	4	1	+
VSBY <2	1	2	3	1	+
<10 & OR <2	1	3	6	2	+
<20 & OR <5	3	7	10	4	1
VSBY ≥5	13	31	34	8	1
≥50 & ≥5	8	19	20	4	+
NC & ≥10	7	16	16	3	+

1101

5

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	5	4	1
<6 & OR <2	+	3	7	6	1
VSBY <2	0	2	6	5	1
<10 & OR <2	+	5	11	9	1
<20 & OR <5	2	14	24	12	2
VSBY ≥5	5	26	35	8	1
≥50 & ≥5	2	8	11	2	+
NC & ≥10	1	5	8	1	+

618

9

EED (KNOTS)			
4-10	11-21	22-33	≥34
+	1	1	+
2	2	2	+
+	1	+	+
2	3	2	+
6	10	4	+
36	34	10	2
24	20	4	+
21	16	4	+

525

10

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	1	1
<6 & OR <2	1	4	7	3	2
VSBY <2	+	3	5	2	2
<10 & OR <2	1	7	11	6	3
<20 & OR <5	2	13	22	13	4
VSBY ≥5	4	21	35	16	1
≥50 & ≥5	2	10	13	5	0
NC & ≥10	1	7	9	2	0

1543

11

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	2	6	4	1
<6 & OR <2	1	3	8	6	2
VSBY <2	+	2	5	4	1
<10 & OR <2	1	8	14	9	2
<20 & OR <5	2	16	28	15	3
VSBY ≥5	3	25	34	12	1
≥50 & ≥5	1	9	13	3	+
NC & ≥10	+	7	10	2	+

2358

12

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	5	2	1
<6 & OR <2	+	4	7	4	1
VSBY <2	+	2	4	3	1
<10 & OR <2	1	8	16	9	3
<20 & OR <5	2	16	30	14	4
VSBY ≥5	2	23	35	13	2
≥50 & ≥5	1	8	10	2	+
NC & ≥10	1	6	7	2	+

1807

13

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	7	3	+
<6 & OR <2	+	5	11	6	1
VSBY <2	+	3	7	4	1
<10 & OR <2	1	8	19	11	2
<20 & OR <5	1	15	31	17	3
VSBY ≥5	2	18	35	15	1
≥50 & ≥5	1	6	11	5	+
NC & ≥10	1	5	9	3	+

1661

14

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	5	1	+
<6 & OR <2	1	4	7	3	+
VSBY <2	+	2	5	1	+
<10 & OR <2	1	6	14	6	1
<20 & OR <5	1	12	28	12	1
VSBY ≥5	2	21	41	17	1
≥50 & ≥5	1	9	16	5	+
NC & ≥10	1	9	13	4	+

2264

15

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	1
<6 & OR <2	0	0	1	1	1
VSBY <2	0	0	0	1	1
<10 & OR <2	0	+	1	1	2
<20 & OR <5	+	2	3	3	2
VSBY ≥5	6	40	43	5	+
≥50 & ≥5	5	34	37	4	0
NC & ≥10	2	14	15	3	0

520

19

PEED (KNOTS)			
4-10	11-21	22-33	≥34
1	1	+	0
2	2	1	+
1	1	+	+
4	7	2	+
11	17	5	+
29	48	11	+
15	22	4	+
14	20	4	+

1624

20

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	1	1	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	2	2	1	1
<20 & OR <5	1	6	6	1	1
VSBY ≥5	9	43	39	4	1
≥50 & ≥5	8	35	29	3	+
NC & ≥10	6	28	25	3	+

779

21

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	6	3	1
<20 & OR <5	1	8	15	7	1
VSBY ≥5	3	31	47	13	1
≥50 & ≥5	2	22	30	6	+
NC & ≥10	2	20	26	5	+

2370

22

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	0	2	5	2	+
<20 & OR <5	+	5	13	4	1
VSBY ≥5	4	34	48	10	1
≥50 & ≥5	4	27	33	5	+
NC & ≥10	3	26	29	4	+

1644

23

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	0	0	+	+	0
<10 & OR <2	+	4	7	3	1
<20 & OR <5	1	9	15	6	1
VSBY ≥5	5	35	43	12	2
≥50 & ≥5	4	24	24	6	+
NC & ≥10	3	22	22	5	+

1265

24

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	1	4	8	3	+
<20 & OR <5	1	7	17	6	1
VSBY ≥5	5	34	46	11	1
≥50 & ≥5	4	24	26	5	+
NC & ≥10	4	24	24	4	+

1402

25

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	1	2	+	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	4	7	2	+
<20 & OR <5	1	8	15	4	+
VSBY ≥5	7	36	47	7	+
≥50 & ≥5	5	25	28	4	+
NC & ≥10	5	24	26	3	+

1664

29

EED (KNOTS)			
4-10	11-21	22-33	≥34
+	+	+	+
+	2	1	1
+	1	+	1
2	5	3	2
6	12	6	3
34	41	10	1
28	28	5	+
24	23	4	+

2867

30

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	0	0
<10 & OR <2	+	3	4	1	+
<20 & OR <5	1	6	8	2	+
VSBY ≥5	7	46	40	5	+
≥50 & ≥5	6	38	28	3	+
NC & ≥10	5	35	26	3	+

1157

31

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	0	0	0
<6 & OR <2	+	+	+	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	1	2	+	+
<20 & OR <5	1	4	8	1	+
VSBY ≥5	5	34	57	4	+
≥50 & ≥5	4	29	45	3	0
NC & ≥10	4	27	42	2	0

1461

32

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	4	+	0
<20 & OR <5	+	5	12	1	0
VSBY ≥5	4	32	60	3	0
≥50 & ≥5	4	26	44	2	0
NC & ≥10	4	25	42	2	0

3934

33

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	+	0	+	0	0
<10 & OR <2	+	1	3	+	0
<20 & OR <5	1	5	10	1	0
VSBY ≥5	8	42	48	2	0
≥50 & ≥5	7	32	29	1	0
NC & ≥10	7	29	25	1	0

1682

34

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	2	3	1	+
VSBY <2	+	+	1	+	+
<10 & OR <2	1	5	9	2	+
<20 & OR <5	1	11	19	4	+
VSBY ≥5	7	37	42	5	+
≥50 & ≥5	6	27	24	2	+
NC & ≥10	5	23	19	1	+

5115

35

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	2	3	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	+	4	7	2	1
<20 & OR <5	1	9	17	4	1
VSBY ≥5	5	33	43	9	+
≥50 & ≥5	4	25	29	5	+
NC & ≥10	3	21	24	3	+

6294

39

EED (KNOTS)			
4-10	11-21	22-33	≥34
+	+	0	0
1	1	0	0
+	+	0	0
4	3	0	0
8	9	0	0
58	23	+	+
46	13	+	0
36	10	+	0

413

40

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	+	0	0
VSBY <2	0	+	0	0	0
<10 & OR <2	+	3	3	0	0
<20 & OR <5	+	9	11	0	+
VSBY ≥5	2	44	52	1	+
≥50 & ≥5	2	34	40	1	0
NC & ≥10	2	34	39	1	0

516

41

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	6	0	0
<20 & OR <5	0	4	16	1	1
VSBY ≥5	2	26	66	4	1
≥50 & ≥5	2	21	49	3	0
NC & ≥10	2	19	47	3	0

202

42

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	5	14	3	+
<20 & OR <5	1	12	31	4	1
VSBY ≥5	3	34	54	6	1
≥50 & ≥5	1	17	18	1	+
NC & ≥10	1	16	17	1	0

641

43

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	2	2	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	1	5	6	1	+
<20 & OR <5	2	11	12	2	1
VSBY ≥5	12	49	32	3	+
≥50 & ≥5	10	36	20	1	0
NC & ≥10	10	34	19	1	0

777

44

WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	+	1	3	1	+
VSBY <2	+	+	1	+	+
<10 & OR <2	1	5	6	1	+
<20 & OR <5	1	11	11	1	+
VSBY ≥5	10	50	34	1	0
≥50 & ≥5	8	37	21	+	0
NC & ≥10	7	33	17	+	0

2403

45

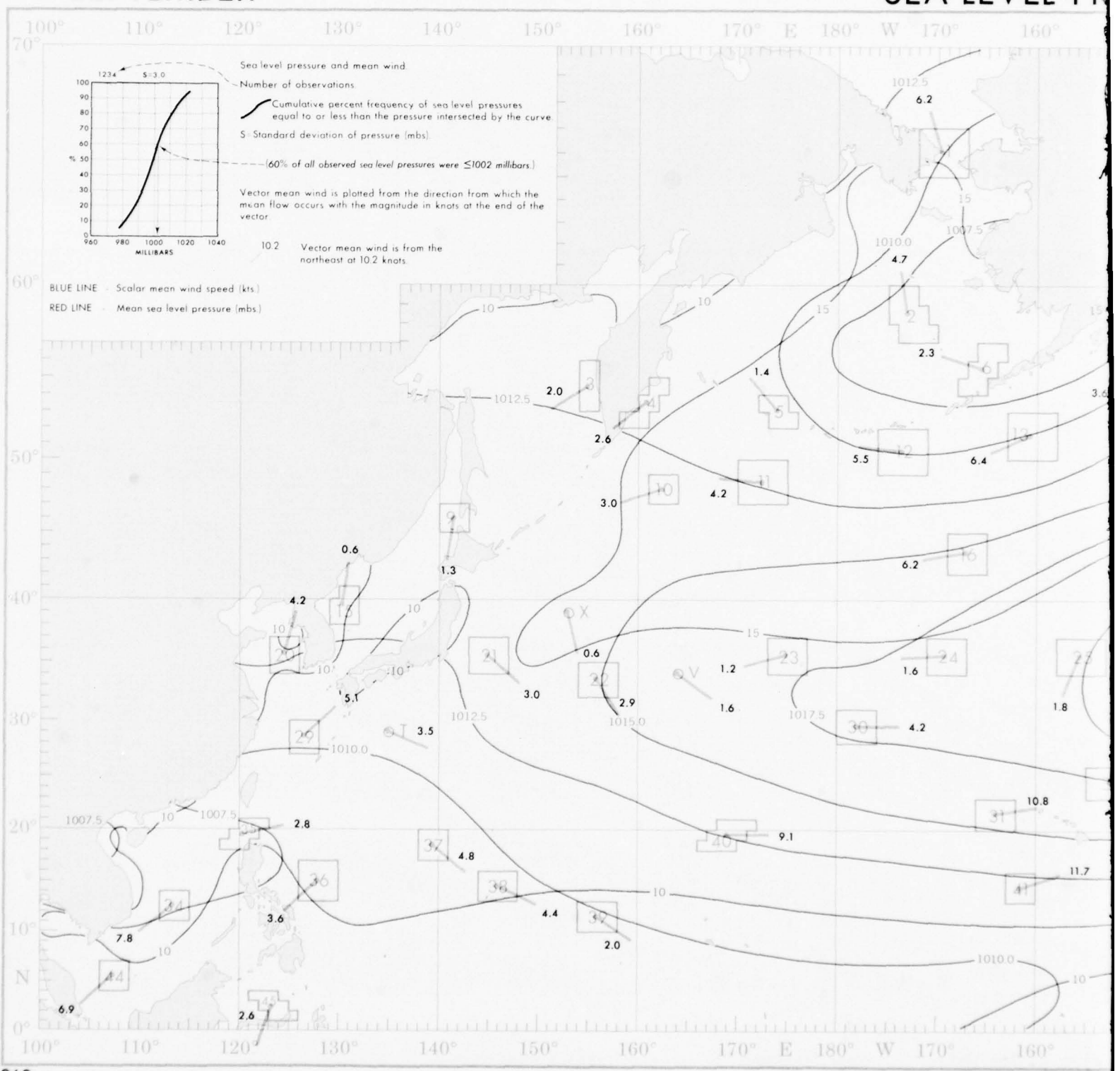
WIND SPEED (KNOTS)					
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	0	0	0
<20 & OR <5	0	0	0	0	0
VSBY ≥5	35	50	15	0	0
≥50 & ≥5	33	48	15	0	0
NC & ≥10	28	45	15	0	0

40

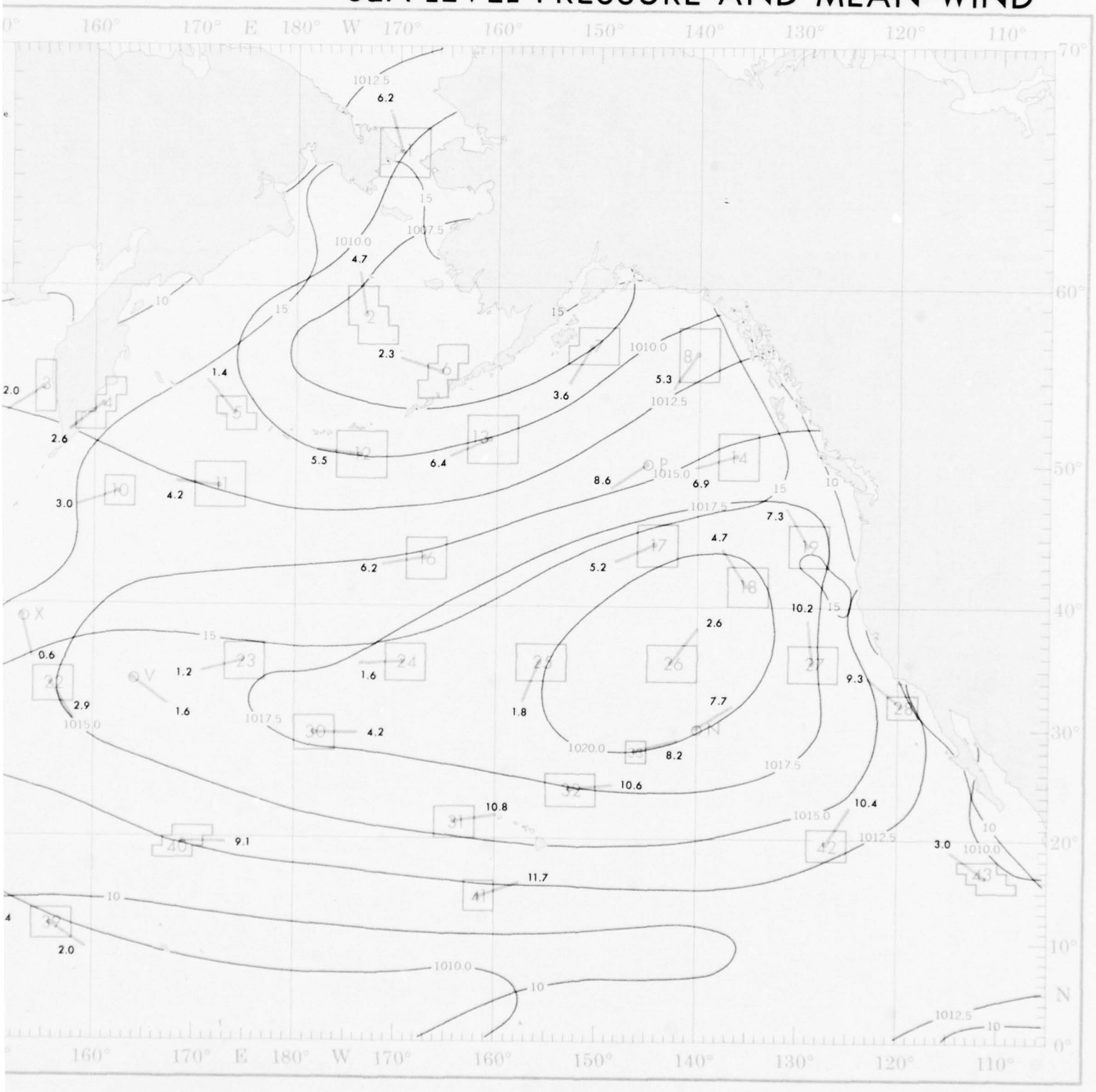
objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER

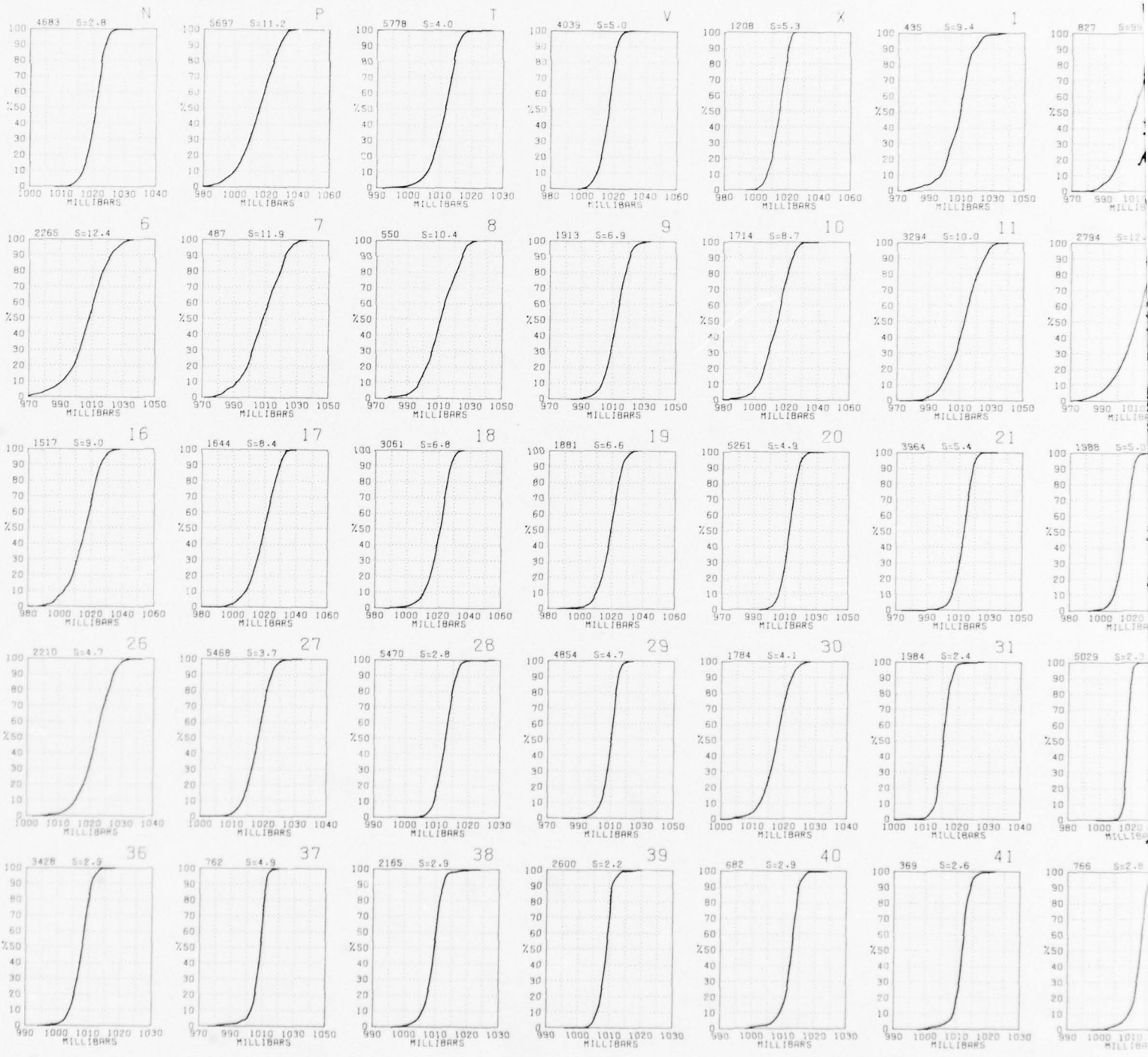
SEA LEVEL PR



SEA LEVEL PRESSURE AND MEAN WIND

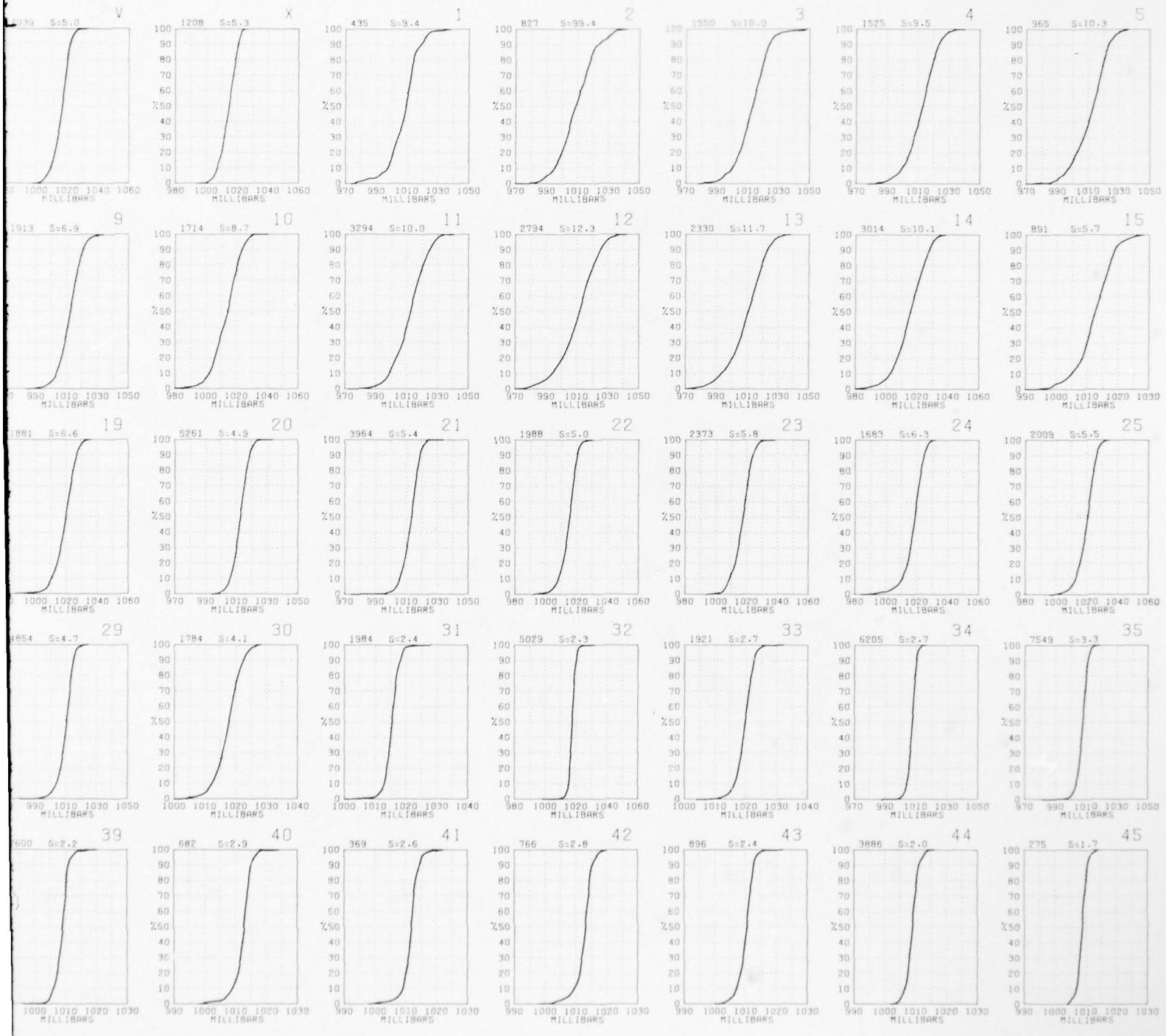


SEA LEVEL PRESSURE



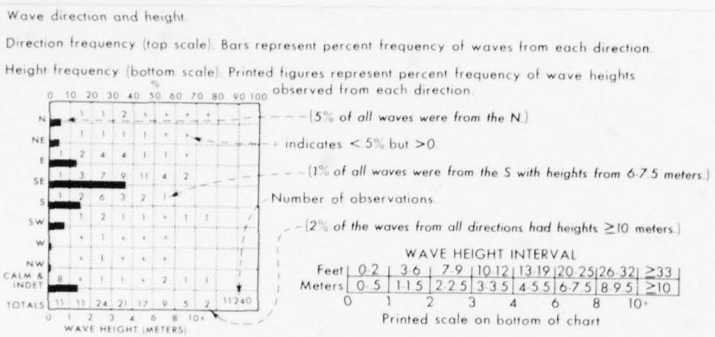
Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

SEPTEMBER



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nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

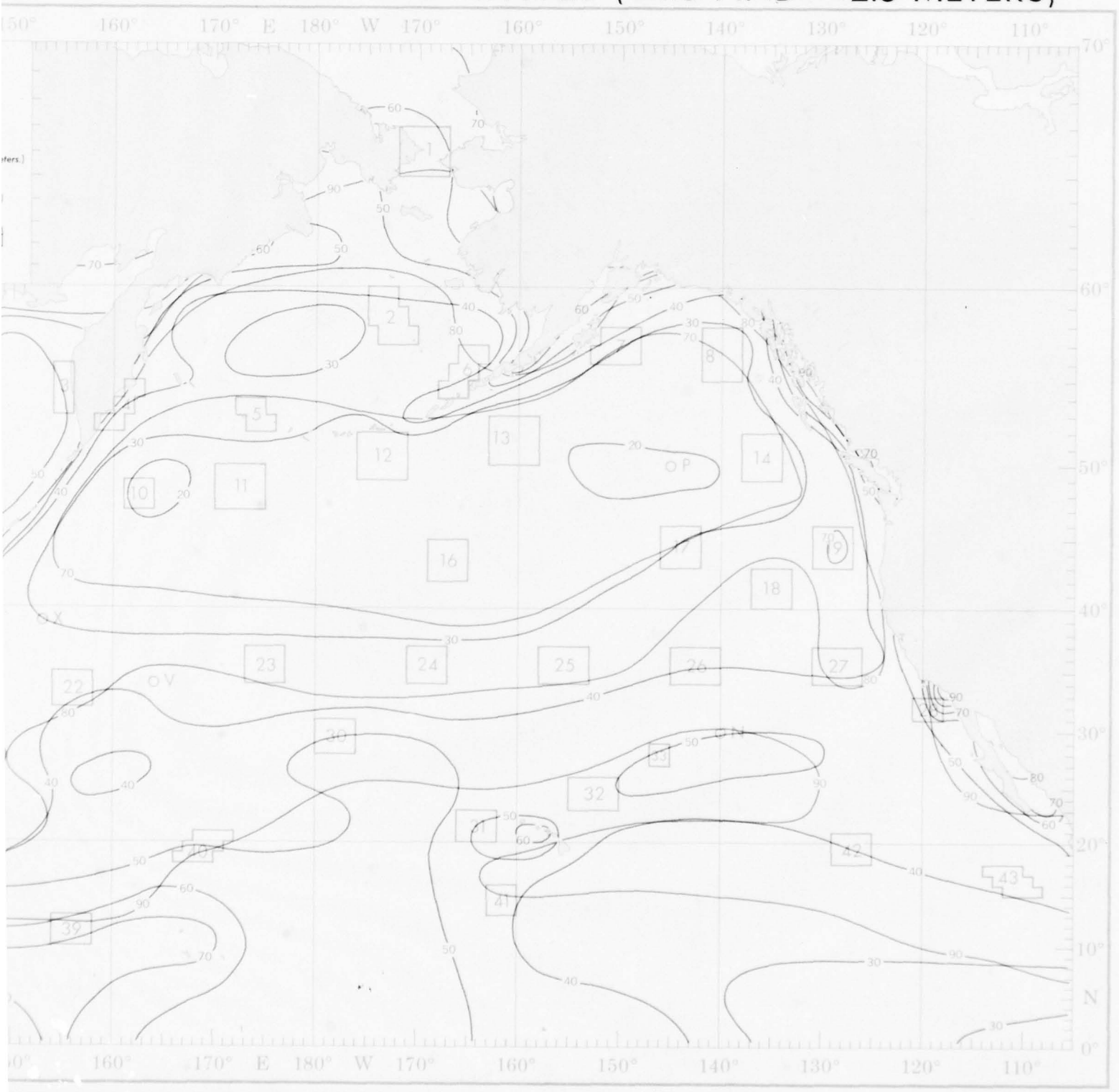
SEPTEMBER



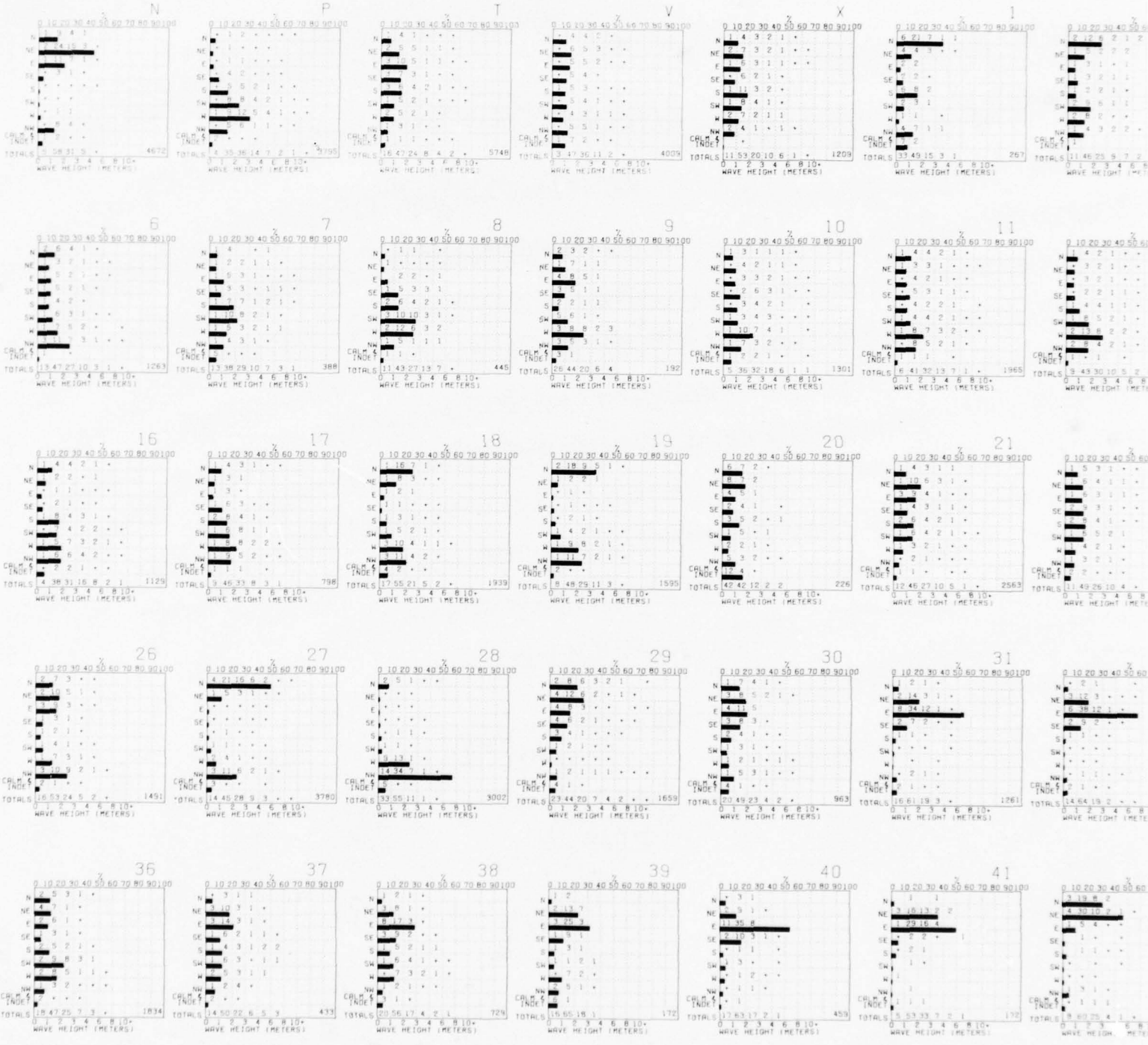
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

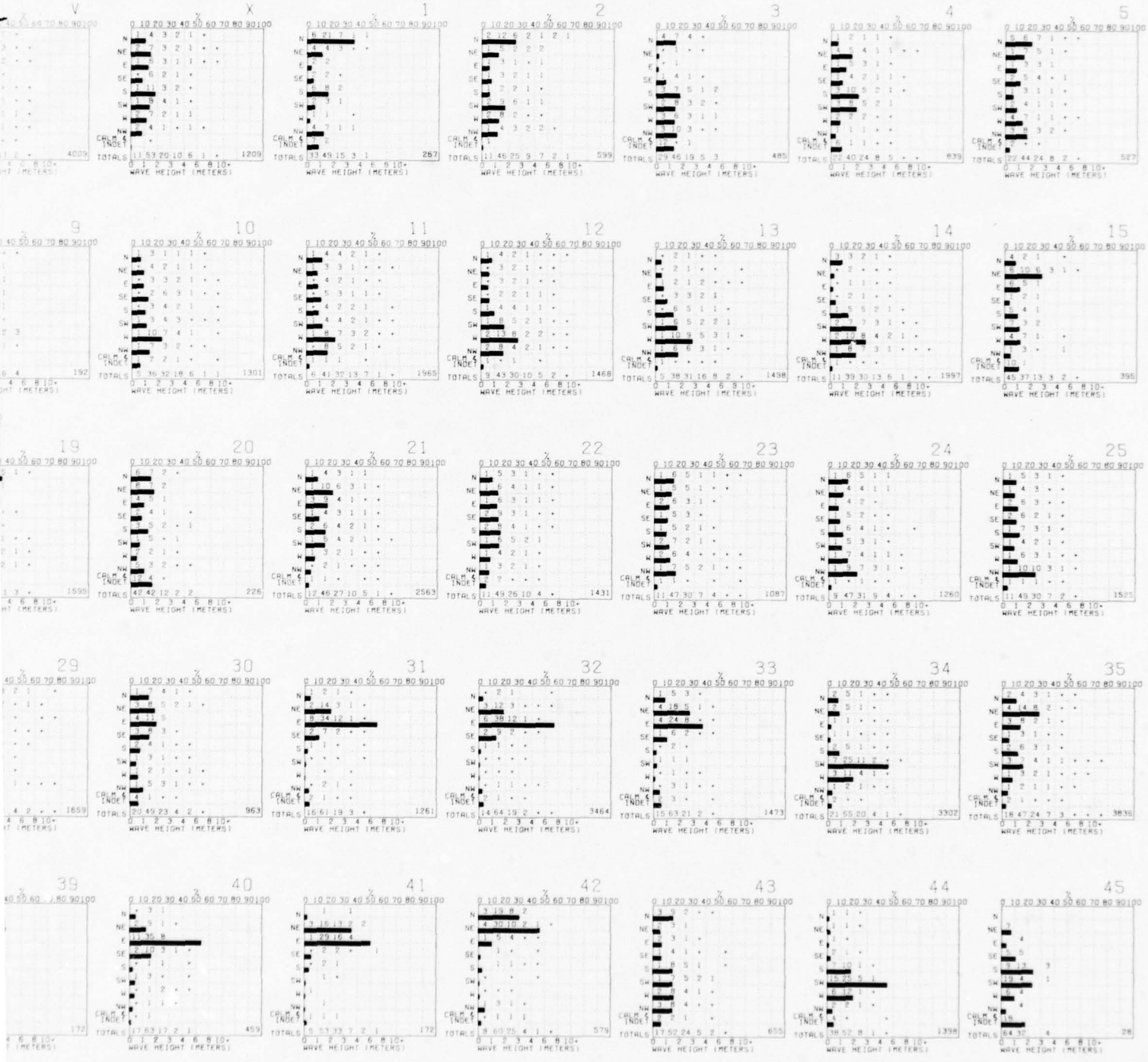
WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT

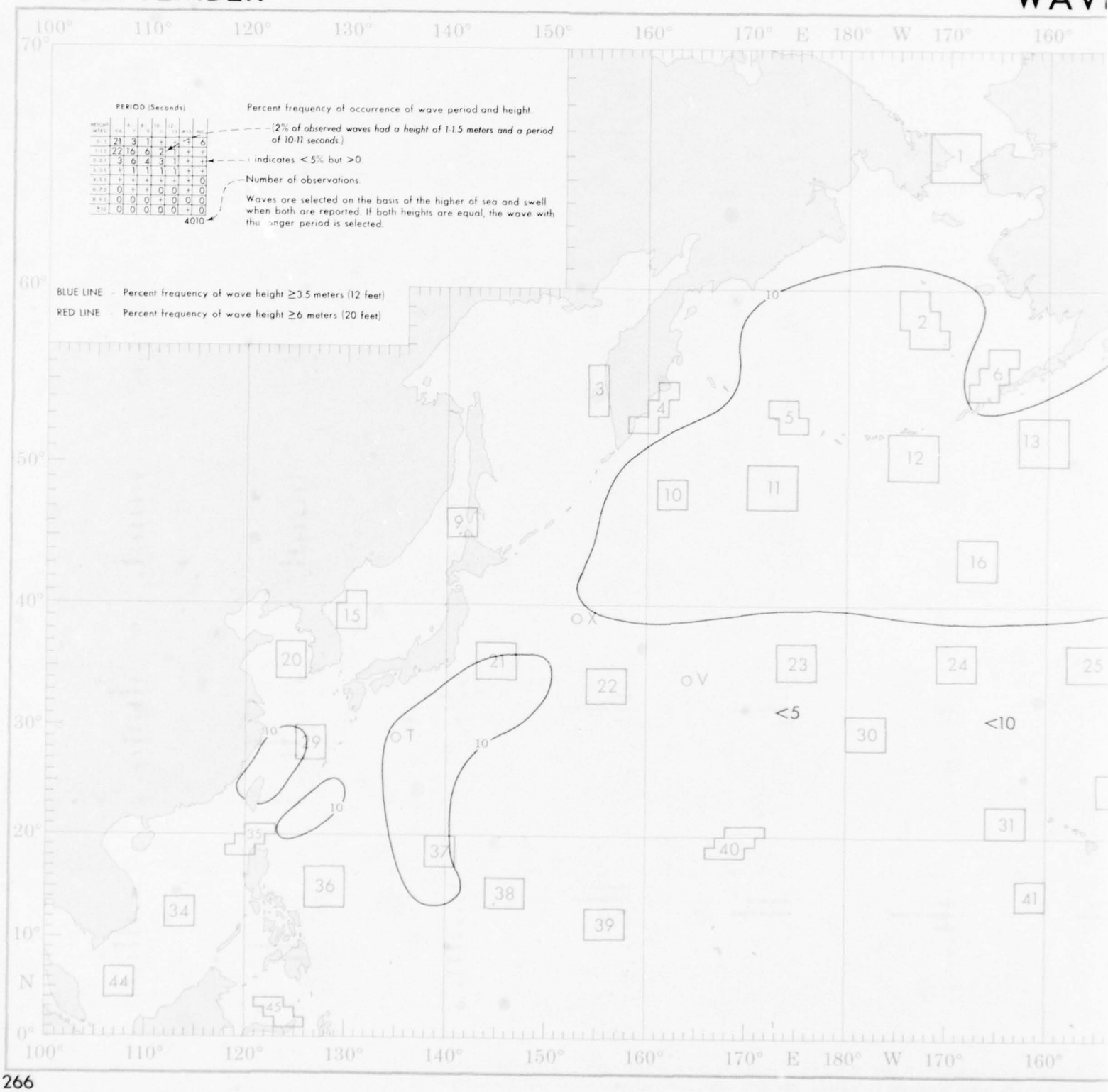


Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

SEPTEMBER


PERIOD (Seconds)
HEIGHT (METERS)
<5
5-7
8-9
10-11
12-13
>13
AVG
0-1.5
21
3
1
+
+
6
1.5-2.5
22
16
6
2
+
+
2-2.5
3
6
4
3
1
+
+
3-3.5
+
1
1
1
1
+
+
4-5.5
+
+
+
+
+
+
0
6-7.5
0
+
+
0
0
+
0
8-9.5
0
0
0
+
0
0
0
>10
0
0
0
0
0
+
0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
indicates < 5% but >0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
<5
<10
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160°
70°
60°
50°
40°
30°
20°
10°
0°
N

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	+	1	+	0	0	1
1-1.5	13	21	19	3	+	0	2
2-2.5	3	18	8	2	+	0	+
3-3.5	+	2	2	1	+	0	+
4-5.5	0	+	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

4677

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	+	0	0	0	2
1-1.5	10	15	5	3	1	+	+
2-2.5	2	17	11	4	2	+	+
3-3.5	+	4	6	2	1	+	+
4-5.5	+	1	4	1	+	+	0
6-7.5	0	1	+	1	+	+	0
8-9.5	0	0	+	+	+	+	0
x10	0	0	0	0	+	0	0

3804

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	1	5	2	+	0	0	8
1-1.5	3	11	13	3	+	0	16
2-2.5	1	2	9	6	1	0	5
3-3.5	+	1	1	3	1	+	2
4-5.5	+	+	1	1	1	+	+
6-7.5	0	+	+	+	1	+	+
8-9.5	0	0	+	+	+	+	0
x10	0	0	0	0	0	0	0

5770

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	+	+	+	0	0	1
1-1.5	14	13	9	4	+	+	7
2-2.5	4	14	12	2	1	+	2
3-3.5	+	3	5	1	1	+	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

4015

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	+	4	4	0	0	0	2
1-1.5	1	9	23	2	+	0	18
2-2.5	+	3	14	1	0	0	3
3-3.5	0	1	7	1	0	0	+
4-5.5	0	1	4	+	0	0	0
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	0	+	0	0	0
x10	0	0	0	0	0	0	0

1211

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	22	1	0	0	0	0	11
1-1.5	32	11	1	0	0	0	4
2-2.5	3	7	2	1	0	0	3
3-3.5	0	1	+	+	0	0	+
4-5.5	+	0	+	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

272

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	1	+	+	0	0	1
1-1.5	28	15	2	+	+	+	+
2-2.5	9	11	4	2	+	+	+
3-3.5	+	5	2	3	+	0	0
4-5.5	+	+	2	+	0	+	0
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	+	0	0	0
x10	0	0	0	0	0	0	0

1303

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	+	+	0	0	6
1-1.5	21	9	2	2	1	+	3
2-2.5	5	12	7	2	1	1	2
3-3.5	2	3	2	1	1	0	1
4-5.5	+	3	3	1	0	0	+
6-7.5	0	1	1	1	0	+	0
8-9.5	0	0	1	0	0	0	0
x10	0	0	0	0	0	0	0

399

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	2	+	+	0	0	1
1-1.5	20	13	4	2	2	1	1
2-2.5	6	7	8	3	1	1	+
3-3.5	2	5	2	2	+	1	1
4-5.5	+	3	1	1	+	0	1
6-7.5	0	0	0	0	0	0	+
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

458

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	0	0	0	0	18
1-1.5	19	3	1	0	0	0	19
2-2.5	4	1	2	0	0	0	12
3-3.5	0	1	1	1	0	0	3
4-5.5	0	0	0	1	0	0	3
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

202

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	+	+	0	0	1
1-1.5	9	16	6	2	+	0	2
2-2.5	2	16	9	3	1	+	2
3-3.5	+	7	6	2	1	+	1
4-5.5	0	1	3	2	1	+	0
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	+	+	+	+
x10	0	0	0	0	0	0	0

1313

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	+	+	0	0	1
1-1.5	14	20	5	1	+	+	1
2-2.5	3	11	12	5	1	+	+
3-3.5	+	3	4	4	2	+	+
4-5.5	+	1	3	2	1	+	+
6-7.5	0	+	1	+	0	+	0
8-9.5	0	0	0	+	+	0	0
x10	0	0	0	0	0	0	0

1990

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	1	+	0	0	1
1-1.5	10	16	6	1	1	+	3
2-2.5	5	11	10	3	+	+	2
3-3.5	1	5	5	2	1	+	1
4-5.5	+	2	4	1	1	1	+
6-7.5	0	+	1	1	+	0	+
8-9.5	0	+	1	0	+	+	0
x10	0	0	0	0	0	0	0

1143

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	19	18	5	1	+	+	2
2-2.5	4	9	12	5	1	+	1
3-3.5	+	2	3	1	1	+	+
4-5.5	+	+	+	1	+	+	+
6-7.5	0	0	0	+	+	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

821

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	1	+	+	0	0	5
1-1.5	31	15	5	1	1	+	2
2-2.5	5	7	5	1	1	+	1
3-3.5	1	2	1	1	+	+	1
4-5.5	+	+	1	+	+	+	+
6-7.5	0	0	0	+	+	+	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1970

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	1	+	0	0	2
1-1.5	23	11	10	1	+	+	1
2-2.5	7	10	6	4	1	+	+
3-3.5	1	3	3	4	1	+	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1613

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	25	5	0	0	0	0	15
1-1.5	26	7	2	1	0	0	4
2-2.5	3	5	3	1	0	0	1
3-3.5	0	1	0	0	0	+	0
4-5.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

239

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	1	1	+	0	0	1
1-1.5	22	16	4	1	1	+	1
2-2.5	4	10	9	2	1	+	1
3-3.5	1	2	3	2	1	+	+
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	0	+	+	+	+
8-9.5	0	0	0	0	+	0	0
x10	0	0	0	0	0	0	0

2612

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	13	2	+	+	0	0	3
1-1.5	23	17	7	2	1	1	1
2-2.5	4	8	7	3	1	+	1
3-3.5	1	2	1	1	+	0	+
4-5.5	+	+	1	+	+	+	+
6-7.5	0	+	0	0	+	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1534

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	2	+	+	0	0	4
1-1.5	17	18	6	1	1	+	1
2-2.5	4	12	8	2	1	+	+
3-3.5	1	3	3	2	+	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	0	0	+	0	0
8-9.5	0	0	+	0	0	+	0
x10	0	0	0	0	0	0	0

3898

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	25	3	1	1	0	0	5
1-1.5	35	13	4	1	1	+	1
2-2.5	3	3	2	1	+	+	+
3-3.5	+	+	+	+	+	+	0
4-5.5	0	0	0	+	+	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

3054

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	17	2	+	1	0	0	5
1-1.5	24	14	3	+	+	+	2
2-2.5	3	7	7	2	+	+	1
3-3.5	+	2	1	2	1	+	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	1	0	1	+	+
8-9.5	0	0	0	+	0	+	+
x10	0	0	0	0	+	0	+

1705

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	15	2	1	1	0	0	5
1-1.5	23	14	5	2	2	+	2
2-2.5	3	8	7	3	1	1	+
3-3.5	+	1	2	1	+	0	+
4-5.5	0	1	+	+	+	+	0
6-7.5	0	+	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1000

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	14	1	+	+	0	0	2
1-1.5	32	17	7	2	+	+	1
2-2.5	4	7	4	1	+	1	+
3-3.5	+	1	1	+	0	0	0
4-5.5	+	0	0	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1284

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	2	+	+	0	0	2
1-1.5	21	18	4	1	1	+	+
2-2.5	3	7	9	3	1	+	1
3-3.5	1	2	2	1	1	+	+
4-5.5	+	+	1	1	+	+	0
6-7.5	0	0	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1893

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	12	2	+	0	0	0	2
1-1.5	23	15	7	2	1	1	+
2-2.5	3	7	7	2	+	1	0
3-3.5	1	1	2	1	1	+	0
4-5.5	1	1	1	1	+	+	0
6-7.5	0	+	+	+	+	2	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

443

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	18	2	1	+	0	0	4
1-1.5	27	18	5	1	1	+	1
2-2.5	3	6	5	1	1	+	+
3-3.5	+	1	1	1	1	+	+
4-5.5	0	+	0	1	+	0	+
6-7.5	0	0	+	+	0	+	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

771

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	14	1	1	0	0	0	7
1-1.5	28	21	6	2	2	0	0
2-2.5	3	5	7	1	0	0	0
3-3.5	0	1	1	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

187

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	2	+	+	0	0	+
1-1.5	32	16	8	2	2	+	1
2-2.5	4	6	6	+	+	+	0
3-3.5	+	+	+	+	+	+	0
4-5.5	0	0	+	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

470

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	0	0	0	0	1
1-1.5	21	24	5	0	1	1	1
2-2.5	5	16	9	0	2	0	1
3-3.5	0	4	2	1	0	0	0
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

173

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

SEPTEMBER

V

PERIOD (SECONDS)						
6- 8- 10- 12-						
7 9 11 13	>13	IND				
* * * 0	0	1				
3 5 4 *	*	7				
4 12 2 1	*	2				
3 5 1 1	*	*				
* 1 1 *	*	*				
* * * *	0	0				
0 0 0 0	0	0				

4015

X

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	*	4	4	0	0	0	2
1-1.5	1	9	23	2	*	0	18
2-2.5	*	3	14	1	0	0	3
3-3.5	0	1	7	1	0	0	*
4-5.5	0	1	4	*	0	0	0
6-7.5	0	0	*	*	0	0	0
8-9.5	0	0	0	*	0	0	0
x10	0	0	0	0	0	0	0

1211

1

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	22	1	0	0	0	0	11
1-1.5	32	11	1	0	0	0	4
2-2.5	3	7	2	1	0	0	3
3-3.5	0	1	*	*	0	0	*
4-5.5	*	0	*	*	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

272

2

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	9	*	1	1	0	0	1
1-1.5	16	18	6	7	0	0	0
2-2.5	8	10	4	3	0	0	*
3-3.5	3	3	2	1	0	0	0
4-5.5	2	1	2	1	0	*	0
6-7.5	0	*	1	0	0	*	0
8-9.5	0	*	0	0	0	*	0
x10	0	0	0	0	0	0	0

505

3

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	16	*	*	0	0	0	16
1-1.5	25	12	1	0	0	0	5
2-2.5	3	11	2	*	0	0	2
3-3.5	*	1	2	*	0	0	1
4-5.5	*	*	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

514

4

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	12	1	*	*	0	0	11
1-1.5	18	7	3	1	*	*	9
2-2.5	6	8	3	1	1	*	5
3-3.5	2	2	2	*	*	*	1
4-5.5	*	1	2	1	1	*	*
6-7.5	0	0	*	0	0	*	0
8-9.5	0	0	0	0	*	0	0
x10	0	0	0	0	0	0	0

859

5

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	12	1	1	0	0	0	9
1-1.5	17	11	6	1	0	*	8
2-2.5	2	11	6	1	1	*	3
3-3.5	1	1	3	1	0	*	1
4-5.5	0	*	1	0	*	0	*
6-7.5	0	0	0	0	*	0	*
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

540

9

PERIOD (SECONDS)						
6- 8- 10- 12-						
7 9 11 13	>13	IND				
1 0 0 0	0	19				
1 2 0 0	0	12				
1 1 1 0	0	3				
0 0 1 0	0	3				
0 0 0 0	0	0				
0 0 0 0	0	0				
0 0 0 0	0	0				

202

10

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	3	1	*	*	0	0	1
1-1.5	9	16	6	2	*	0	2
2-2.5	2	16	9	3	1	*	2
3-3.5	*	7	6	2	1	*	1
4-5.5	0	1	3	2	1	*	0
6-7.5	0	0	*	*	*	*	0
8-9.5	0	0	*	*	*	*	*
x10	0	0	0	0	0	0	0

1313

11

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	5	1	*	*	0	0	1
1-1.5	14	20	5	1	*	*	1
2-2.5	3	11	12	5	1	*	*
3-3.5	*	3	4	4	2	*	*
4-5.5	*	1	3	2	1	*	*
6-7.5	0	*	1	*	0	*	0
8-9.5	0	0	0	*	*	0	0
x10	0	0	0	0	0	0	0

1990

12

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	17	18	4	1	1	*	1
2-2.5	5	11	9	4	*	*	*
3-3.5	*	3	3	2	2	*	*
4-5.5	*	1	1	1	1	*	*
6-7.5	0	*	1	*	*	*	0
8-9.5	0	0	0	*	*	0	0
x10	0	0	0	0	0	0	0

1495

13

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	4	1	*	0	0	0	1
1-1.5	15	17	4	*	*	*	1
2-2.5	4	11	10	4	1	*	*
3-3.5	1	5	6	3	1	*	0
4-5.5	*	2	3	1	1	1	*
6-7.5	0	*	1	*	*	*	0
8-9.5	0	0	*	0	*	0	0
x10	0	0	0	0	0	0	0

1511

14

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	9	1	*	*	0	0	2
1-1.5	16	15	5	1	1	*	1
2-2.5	5	11	9	3	1	*	*
3-3.5	1	4	4	2	1	*	*
4-5.5	*	1	2	1	1	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	*	0	0	*	0
x10	0	0	0	0	*	0	0

2021

15

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	34	1	0	0	0	0	10
1-1.5	31	3	1	0	0	*	2
2-2.5	8	2	3	*	0	0	0
3-3.5	0	1	1	1	0	0	*
4-5.5	*	2	0	0	*	0	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

397

19

PERIOD (SECONDS)						
6- 8- 10- 12-						
7 9 11 13	>13	IND				
1 * 0 0	0	2				
1 10 1 *	*	1				
0 6 4 1	*	*				
3 3 4 1	*	*				
* 1 1 *	*	*				
0 * * *	*	0				
0 0 0 0	0	0				
0 0 0 0	0	0				

1513

20

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	25	5	0	0	0	0	15
1-1.5	26	7	2	1	0	0	4
2-2.5	3	5	3	1	0	0	1
3-3.5	0	1	0	0	0	*	0
4-5.5	0	0	2	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

239

21

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	10	1	1	*	0	0	1
1-1.5	22	16	4	1	1	*	1
2-2.5	4	10	9	2	1	*	1
3-3.5	1	2	3	2	1	*	*
4-5.5	*	1	1	1	1	*	*
6-7.5	0	*	0	*	*	*	0
8-9.5	0	0	0	0	*	0	0
x10	0	0	0	0	0	0	0

2612

22

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	9	1	*	*	0	0	3
1-1.5	23	16	5	2	1	*	2
2-2.5	5	9	7	2	1	*	1
3-3.5	1	3	3	2	1	*	*
4-5.5	*	1	1	1	*	*	*
6-7.5	0	*	0	*	*	*	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1458

23

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	11	1	*	*	0	0	2
1-1.5	18	16	7	2	1	*	2
2-2.5	4	10	11	2	1	*	1
3-3.5	*	2	2	1	*	*	0
4-5.5	*	1	1	1	*	*	*
6-7.5	0	0	*	0	0	0	0
8-9.5	0	0	0	0	*	0	*
x10	0	0	0	0	0	0	0

1123

24

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	19	19	5	1	1	*	1
2-2.5	5	12	8	4	1	*	1
3-3.5	1	2	3	2	1	*	*
4-5.5	*	1	1	1	1	*	*
6-7.5	0	0	*	0	*	0	0
8-9.5	0	0	0	0	0	0	*
x10	0	0	0	0	0	0	0

1276

25

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	9	1	*	*	0	0	2
1-1.5	21	18	6	1	1	*	1
2-2.5	5	10	9	4	*	1	1
3-3.5	*	2	2	1	1	*	*
4-5.5	*	*	*	1	*	*	*
6-7.5	0	0	*	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1545

29

PERIOD (SECONDS)						
6- 8- 10- 12-						
7 9 11 13	>13	IND				
2 * 1 0	0	5				
8 3 * *	*	2				
1 7 2 *	*	1				
1 1 2 1	*	*				
1 1 1 *	*	*				
1 1 0 1	*	*				
0 0 * *	*	*				
1 0 0 *	*	*				

1705

30

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	15	2	1	1	0	0	5
1-1.5	23	14	5	2	2	*	2
2-2.5	3	8	7	3	1	1	*
3-3.5	*	1	2	1	*	0	*
4-5.5	0	1	*	*	0	0	*
6-7.5	0	*	*	0	0	*	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1000

31

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	14	1	*	*	0	0	2
1-1.5	32	17	7	2	*	*	1
2-2.5	4	7	4	1	*	1	*
3-3.5	*	1	1	*	0	0	*
4-5.5	*	0	0	*	*	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1284

32

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	11	2	1	*	0	0	3
1-1.5	30	20	7	2	1	*	2
2-2.5	4	6	5	2	1	*	*
3-3.5	*	1	*	*	*	*	*
4-5.5	0	*	*	*	0	*	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

3558

33

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	10	2	1	1	0	0	3
1-1.5	21	22	14	1	1	*	2
2-2.5	2	7	7	2	1	*	*
3-3.5	0	1	1	*	0	0	0
4-5.5	*	*	*	*	0	0	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1511

34

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	19	1	*	*	0	0	3
1-1.5	26	20	5	1	*	0	1
2-2.5	3	7	7	2	*	*	*
3-3.5	*	2	1	*	*	*	*
4-5.5	*	*	*	*	0	*	0
6-7.5	0	0	-	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

3424

35

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	16	2	*	*	0	0	2
1-1.5	23	16	5	1	*	0	1
2-2.5	3	8	9	3	*	*	*
3-3.5	1	1	2	2	1	*	*
4-5.5	*	*	1	1	*	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	*	0	0	0	0
x10	0	0	*	0	0	0	0

3948

39

PERIOD (SECONDS)						
6- 8- 10- 12-						
7 9 11 13	>13	IND				
1 0 0 0	0	7				
6 2 2 0	0	1				
7 1 0 0	0	0				
1 0 0 0	0	0				
0 0 0 0	0	0				
0 0 0 0	0	0				
0 0 0 0	0	0				

187

40

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	15	2	*	*	0	0	*
1-1.5	32	16	8	2	2	*	1
2-2.5	4	6	6	*	*	*	0
3-3.5	*	*	*	*	*	*	0
4-5.5	0	0	*	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

470

41

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	3	1	0	0	0	0	1
1-1.5	21	24	5	0	1	1	1
2-2.5	6	16	9	0	2	0	1
3-3.5	0	4	2	1	0	0	0
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	1	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

173

42

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	25	21	8	3	1	*	2
2-2.5	5	10	6	3	1	*	1
3-3.5	0	2	1	1	*	0	1
4-5.5	*	1	*	*	0	0	0
6-7.5	0	0	*	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

587

43

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	13	1	1	1	0	0	4
1-1.5	20	16	6	3	2	*	3
2-2.5	2	9	7	4	1	*	1
3-3.5	0	1	1	1	0	1	*
4-5.5	*	0	1	1	0	0	1
6-7.5	0	0	*	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

680

44

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	34	2	1	*	0	0	7
1-1.5	27	14	3	1	*	*	3
2-2.5	2	3	2	*	0	0	*
3-3.5	*	*	*	*	0	0	0
4-5.5	0	0	0	0	0	0	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

1527

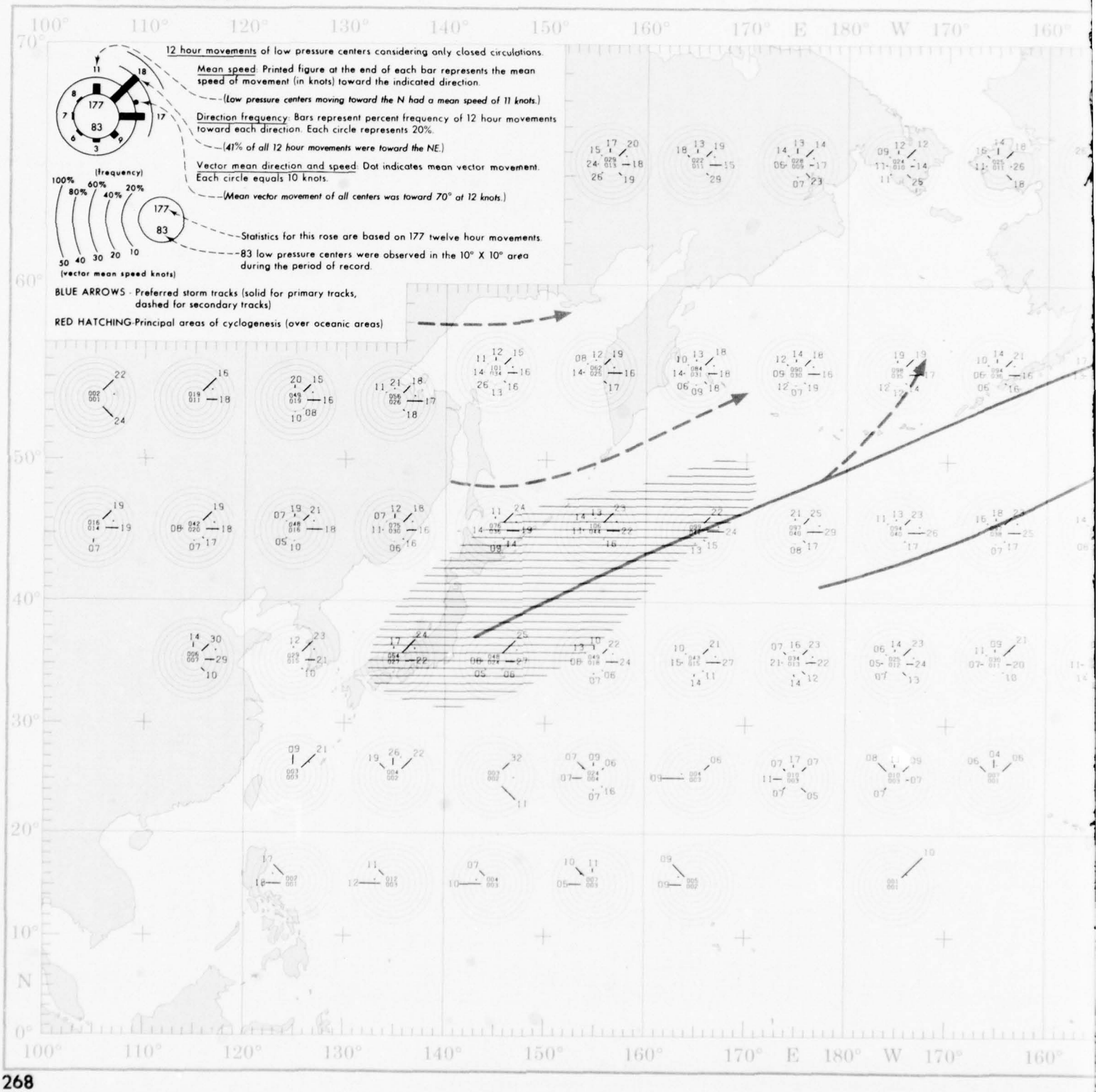
45

HEIGHT (MTRS)	PERIOD (SECONDS) 6- 8- 10- 12-						
	<6	7	9	11	13	>13	IND
0-.5	47	0	0	0	0	0	20
1-1.5	17	13	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	3	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
x10	0	0	0	0	0	0	0

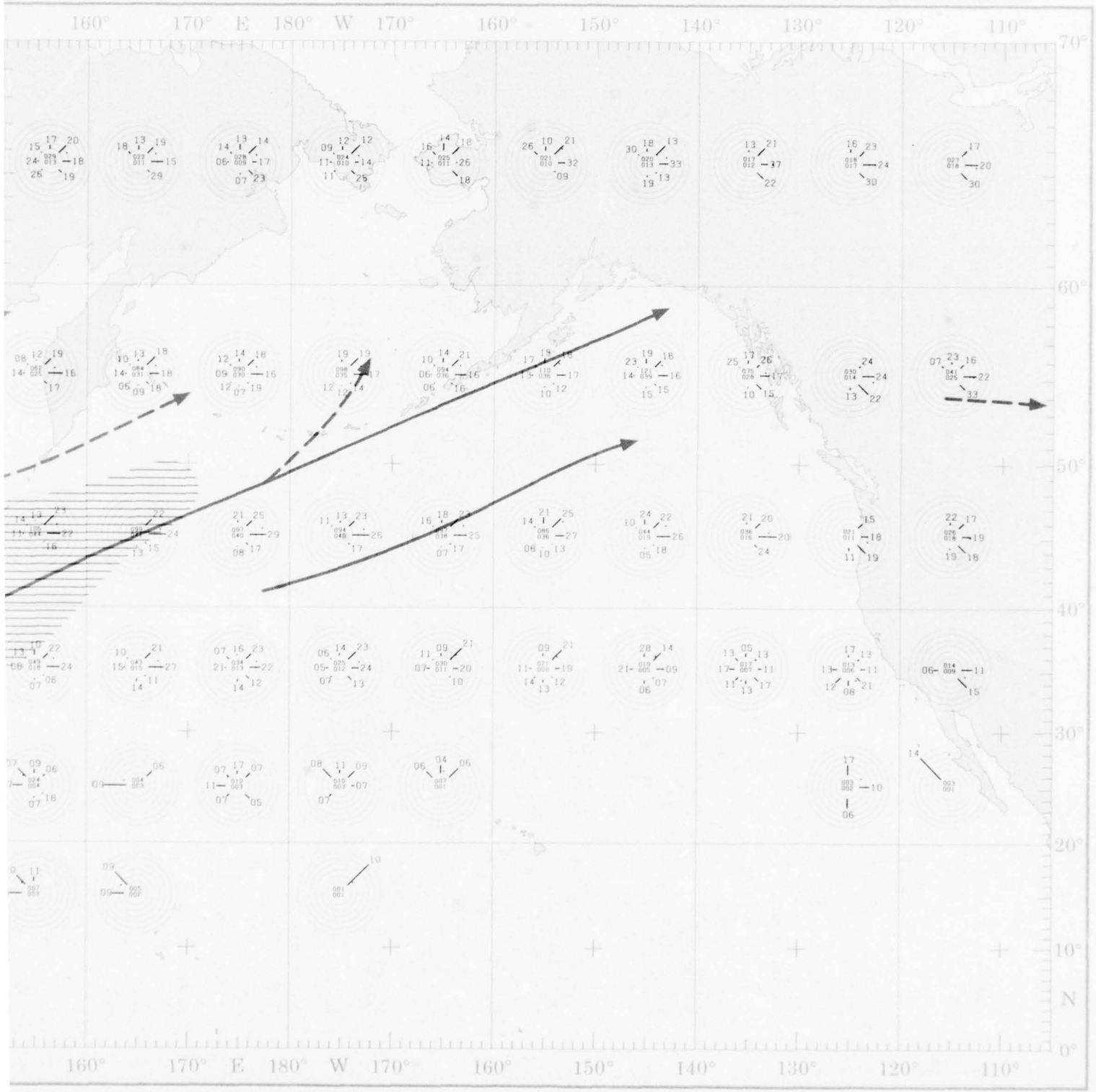
30

the objective compilation of available data for specified areas without regard to suspected biases.
ses (opposite page) are based on all available data subjectively adjusted where bias was evident.

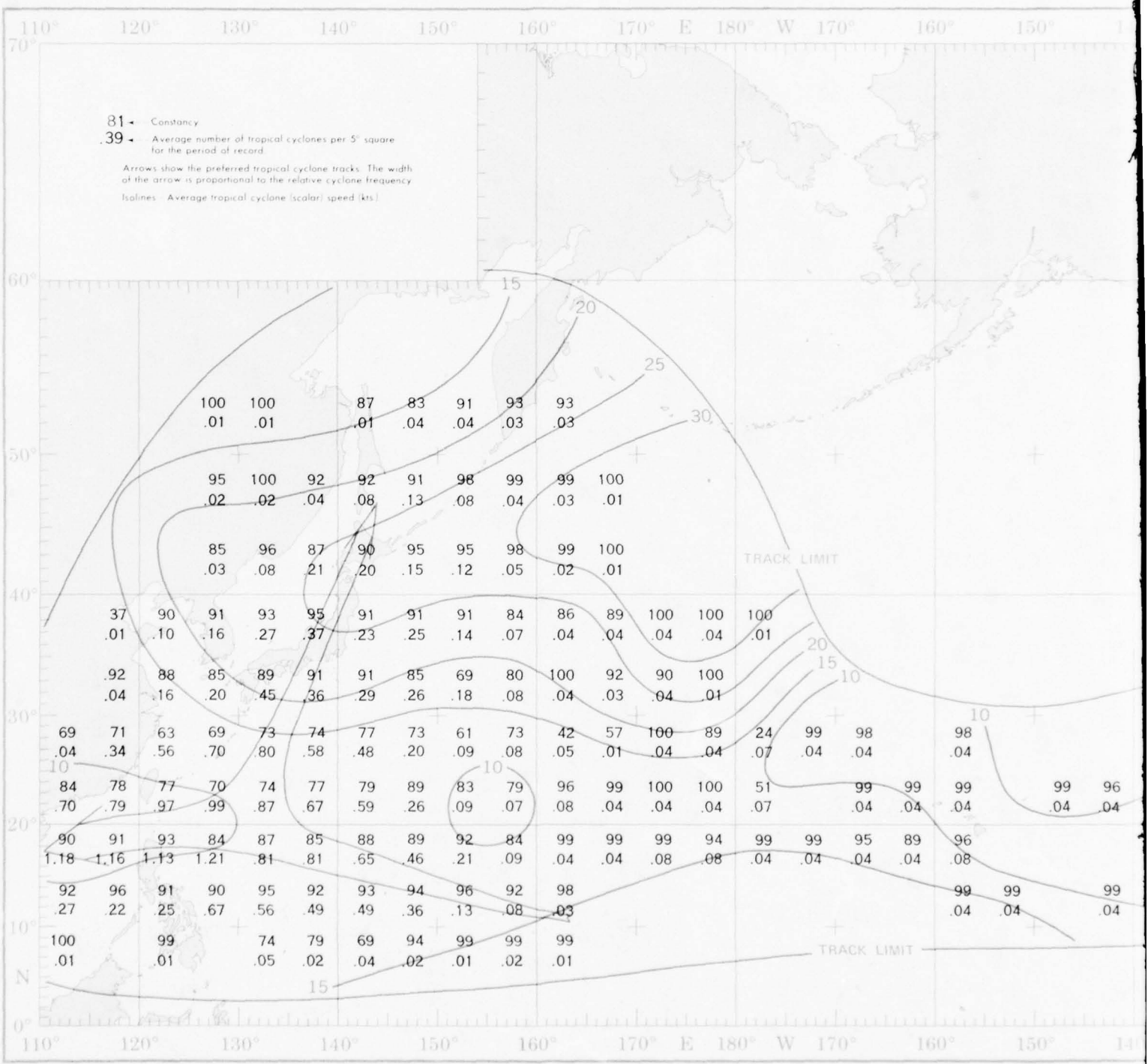
SEPTEMBER

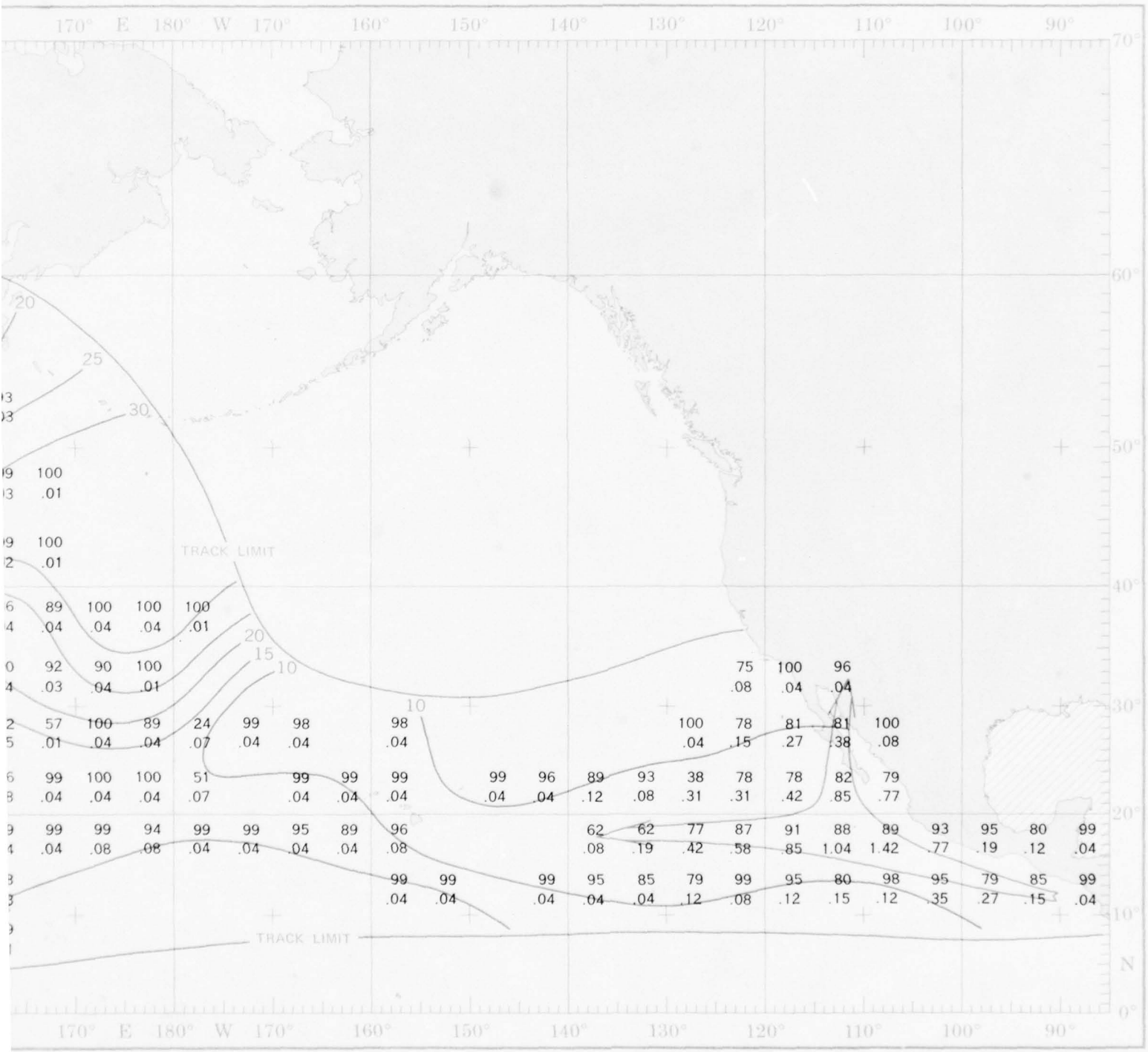

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° 0° N

LOW PRESSURE CENTERS

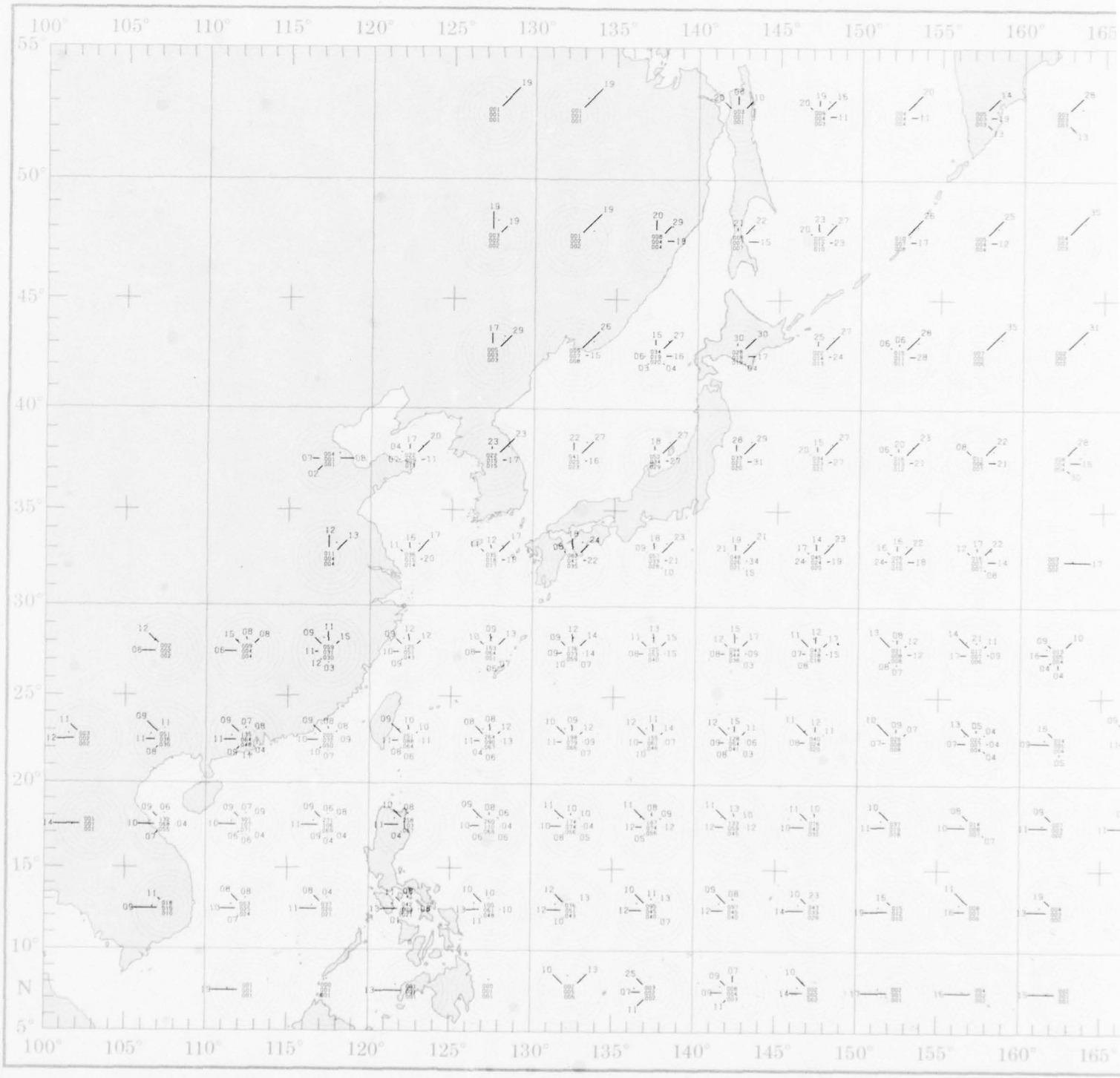


TROPICAL CYCLONE CHARACTERISTICS

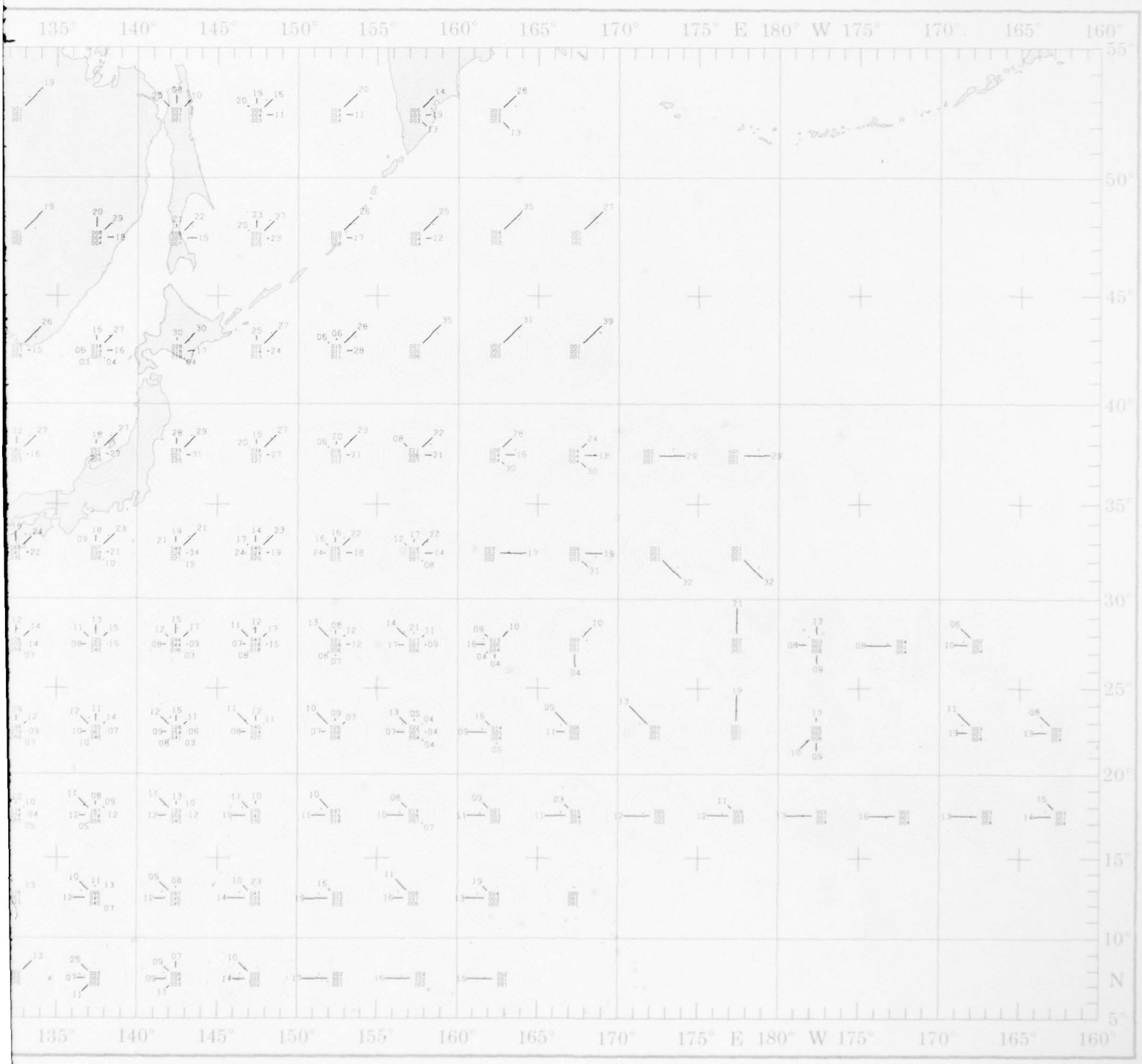



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
TRACK LIMIT
TRACK LIMIT
20
25
30
20
15
10
10
9 100
3 .01
9 100
2 .01
6 89 100 100 100
4 .04 .04 .04 .01
0 92 90 100
4 .03 .04 .01
2 57 100 89 24 99 98 98
5 .01 .04 .04 .07 .04 .04 .04
6 99 100 100 51 99 99 99 99 96 89 93 38 78 78 82 79
8 .04 .04 .04 .07 .04 .04 .04 .04 .04 .12 .08 .31 .31 .42 .85 .77
9 99 99 94 99 99 95 89 96 62 62 77 87 91 88 89 93 95 80 99
4 .04 .08 .08 .04 .04 .04 .04 .08 .08 .19 .42 .58 .85 1.04 1.42 .77 .19 .12 .04
3 99 99 99 95 85 79 99 95 80 98 95 79 85 99
3 .04 .04 .04 .04 .04 .12 .08 .12 .15 .12 .35 .27 .15 .04
9
1
75 100 96
.08 .04 .04
100 78 81 81 100
.04 .15 .27 .38 .08

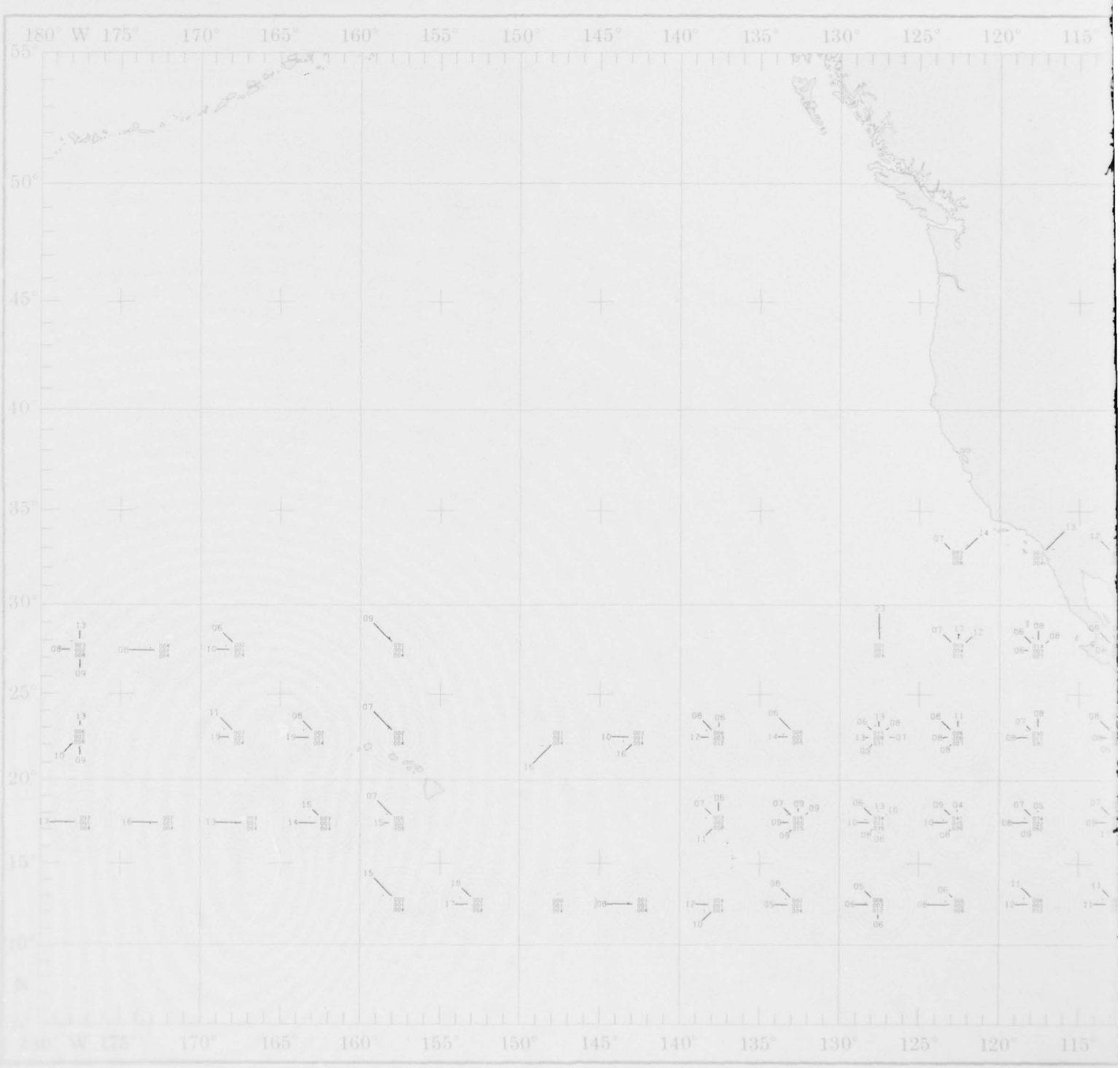
SEPTEMBER


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

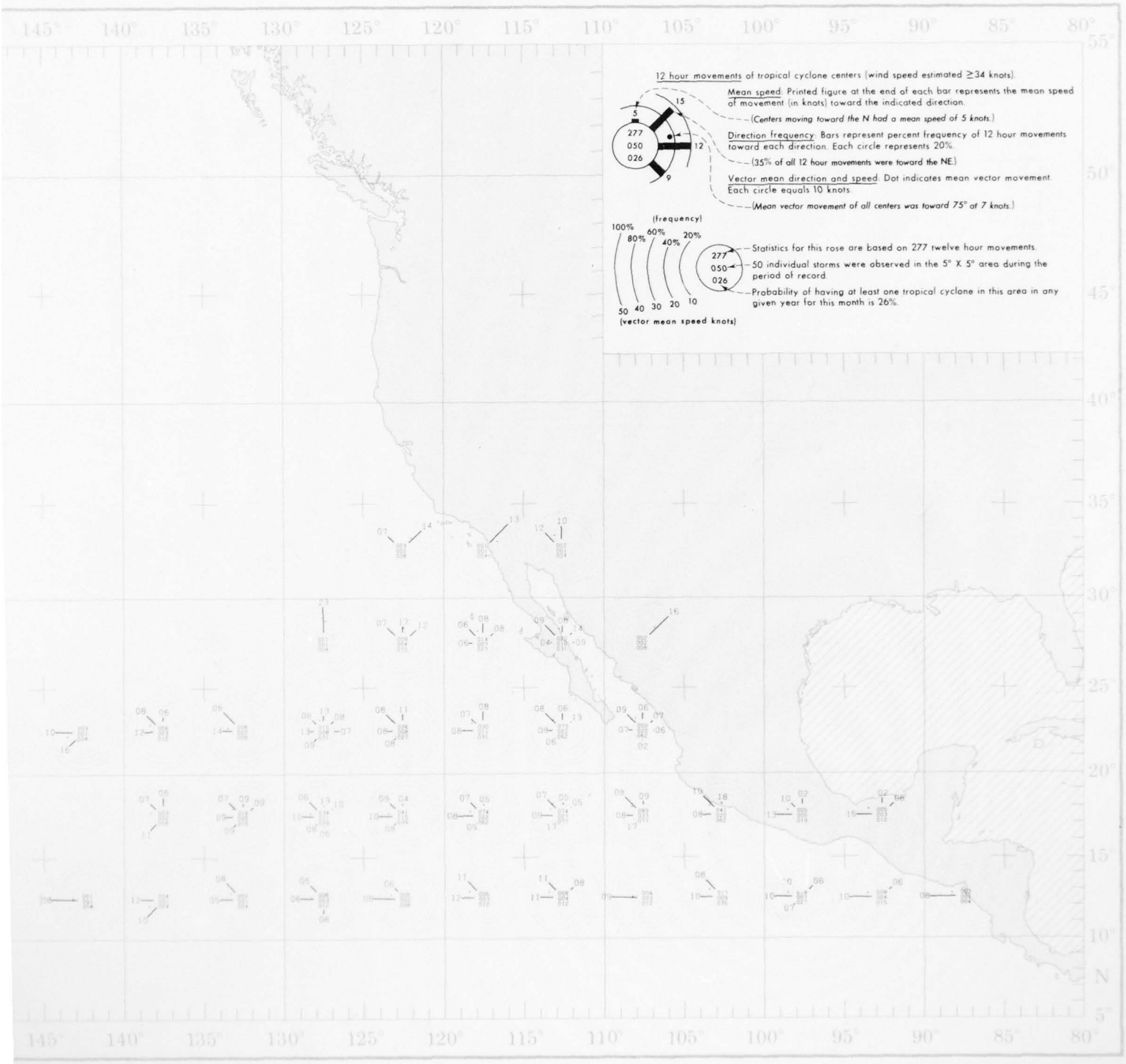
TROPICAL CYCLONE



TROPICAL CYCLONE

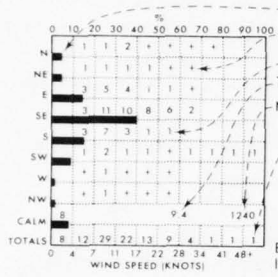


SEPTEMBER


145° 140° 135° 130° 125° 120° 115° 110° 105° 100° 95° 90° 85° 80°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° N
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

OCTOBER

Direction frequency (top scale). Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale). Printed figures represent percent frequency of wind speeds observed from each direction.



(4% of all winds were from the N.)

+ indicates <.5% but >0.

(1% of all winds were from the S with a speed 22-27 knots.)

The scalar mean speed was 9.4 knots.

Number of observations.

(1% of winds from all directions had wind speed ≥48 knots.)

WIND SPEED INTERVAL (KNOTS)

0-3	4-6	7-10	11-16	17-21	22-27	28-33	34-40	41-47	≥48
0	4	7	11	17	22	28	34	41	48+

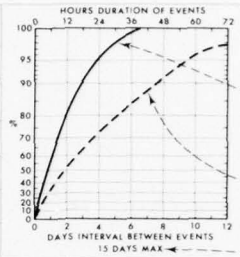
Printed scale on bottom of chart

Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).

BLUE LINE - Percent frequency of wind speed ≤10 knots

RED LINE - Percent frequency of wind speed ≥34 knots

SURFACE WINDS



Hours duration of gales - Days interval between gales.

Cumulative percent frequency of hours duration of gales equal to or less than the number of hours intersected by the solid curve refers to the top scale.

(98% of gales had a duration ≤30 hours.)

Cumulative percent frequency of days interval between gales equal to or less than the number of days intersected by the broken curve refers to the bottom scale.

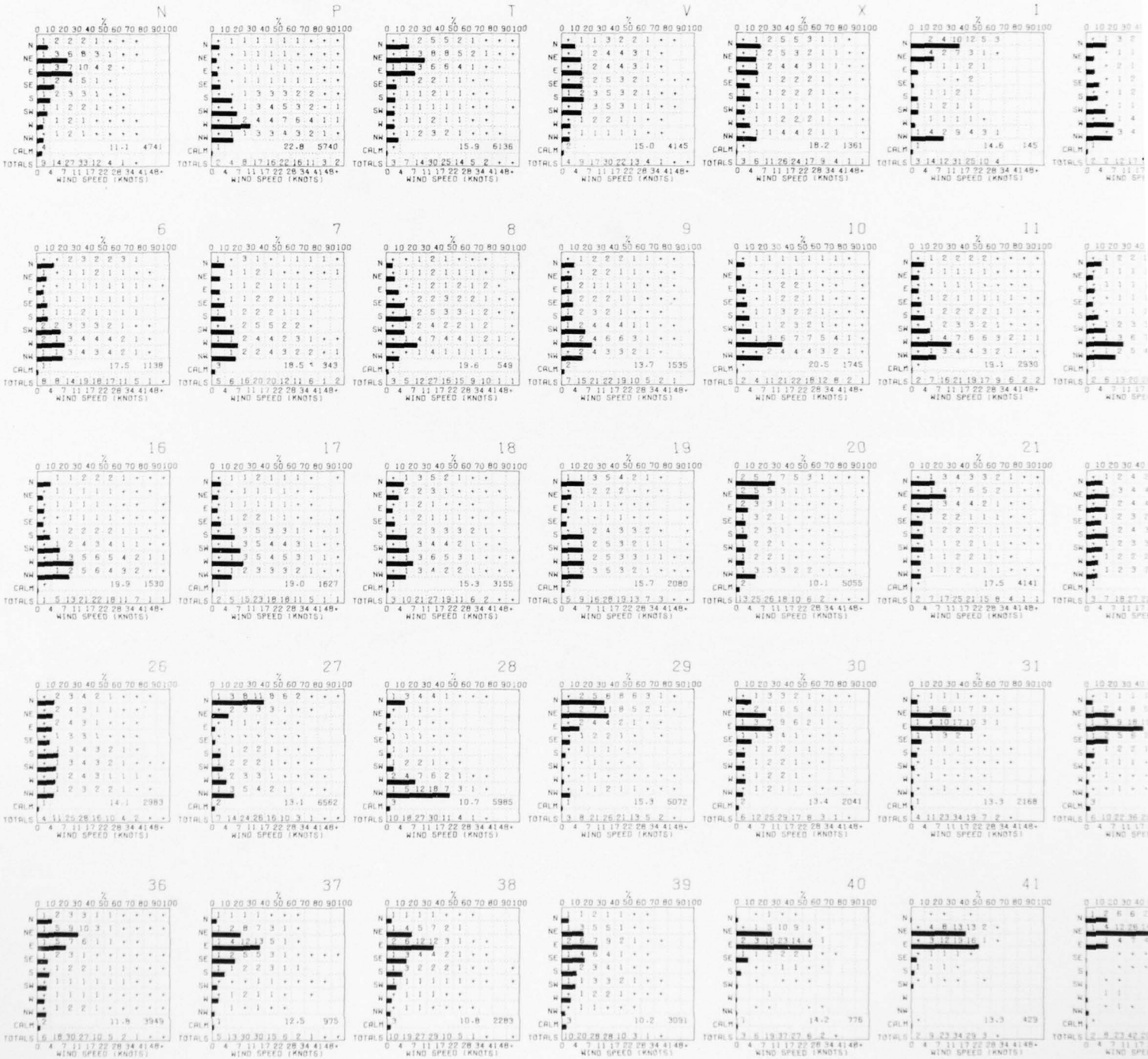
(88% of gales were followed by another gale in 7 days or less.)

Top and bottom scales are variable.
The maximum value(s) of hours duration and/or days interval will be displayed below the graph when the graph limits are exceeded.

(100% of gales were followed by another gale in 15 days or less.)

Durations and intervals for a particular month extend from the time they begin (or the first of the month if already in progress) and are terminated at the actual ending time, regardless of what month that may be.

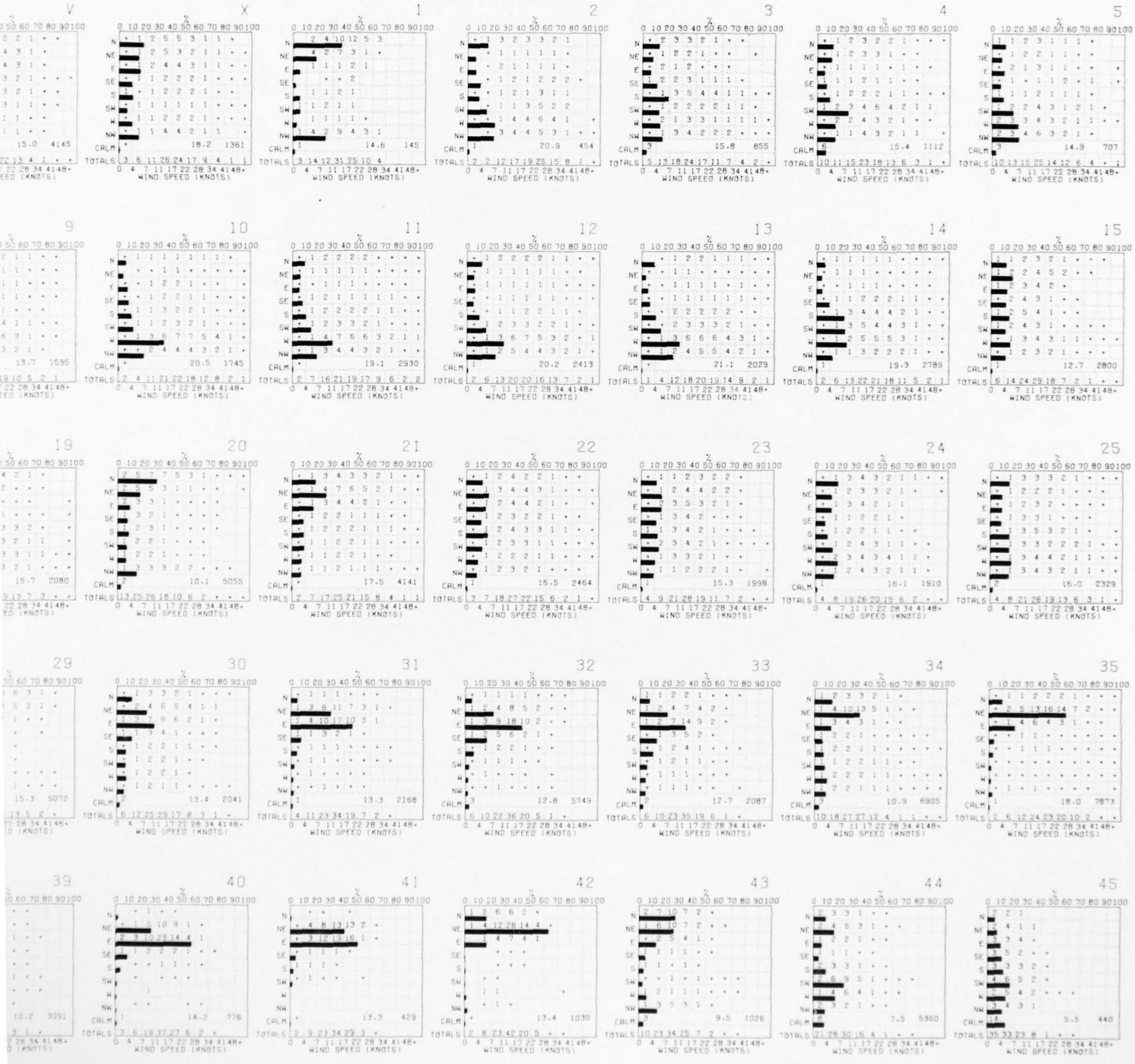
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

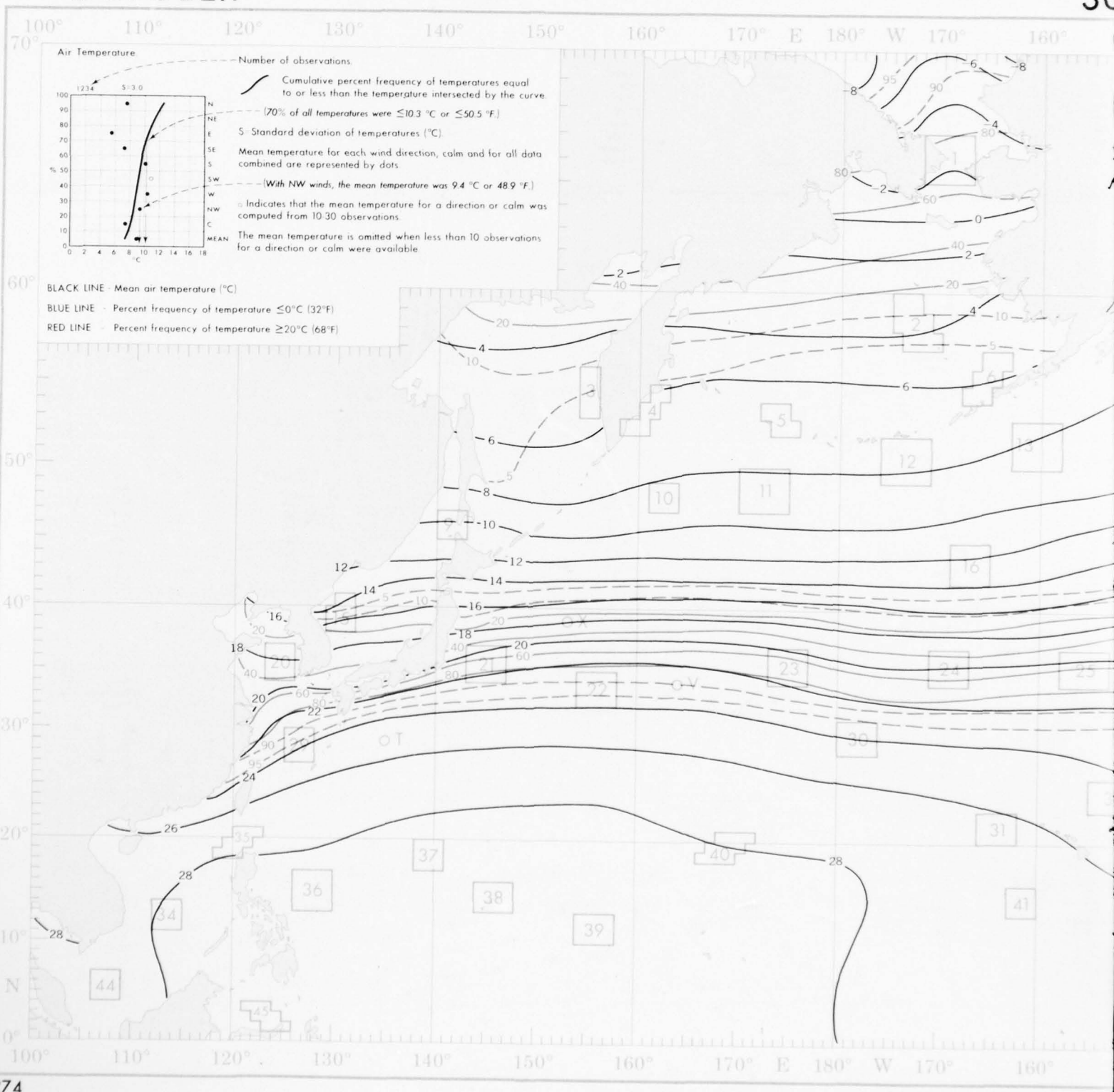
D

OCTOBER

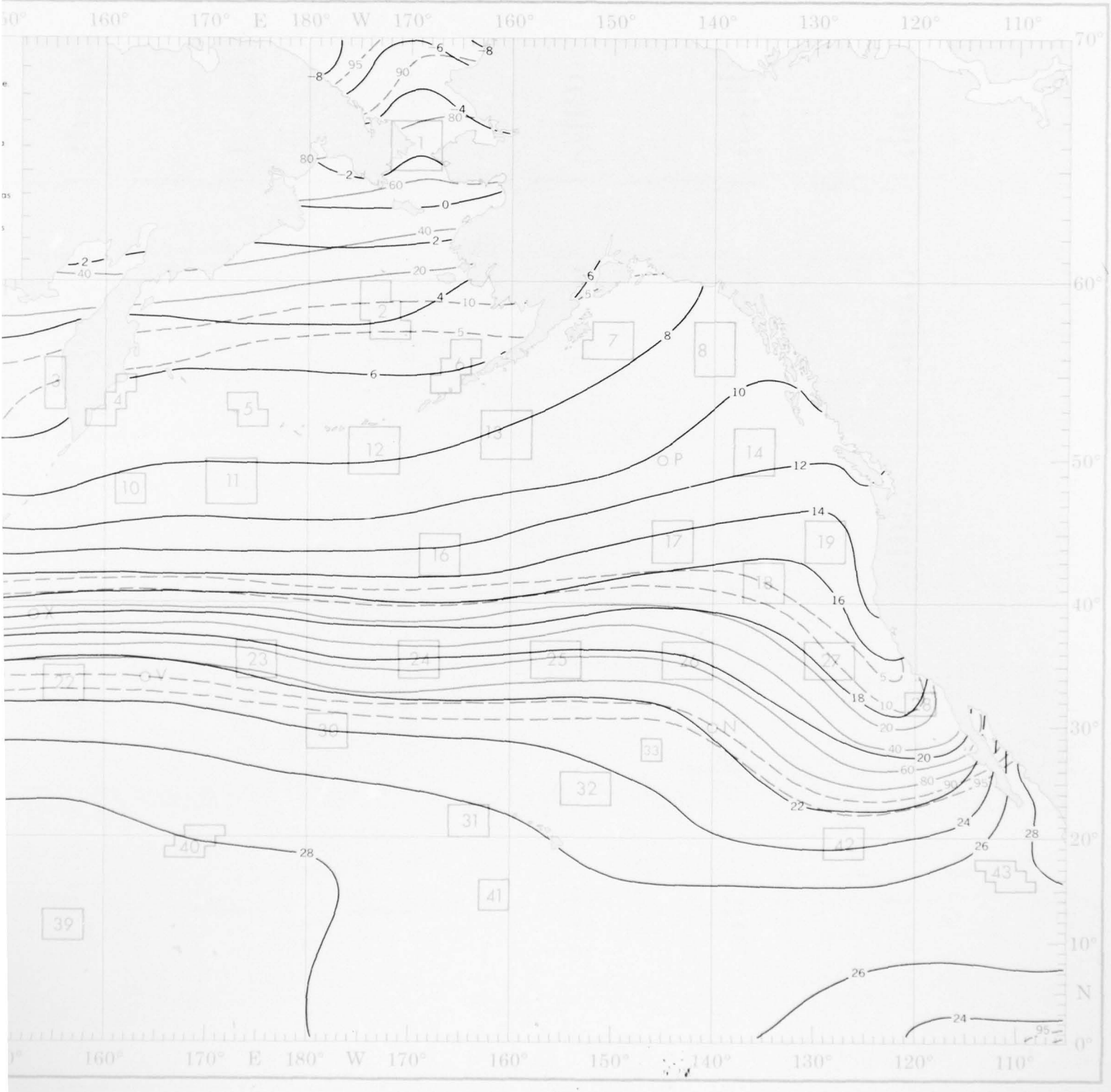


objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

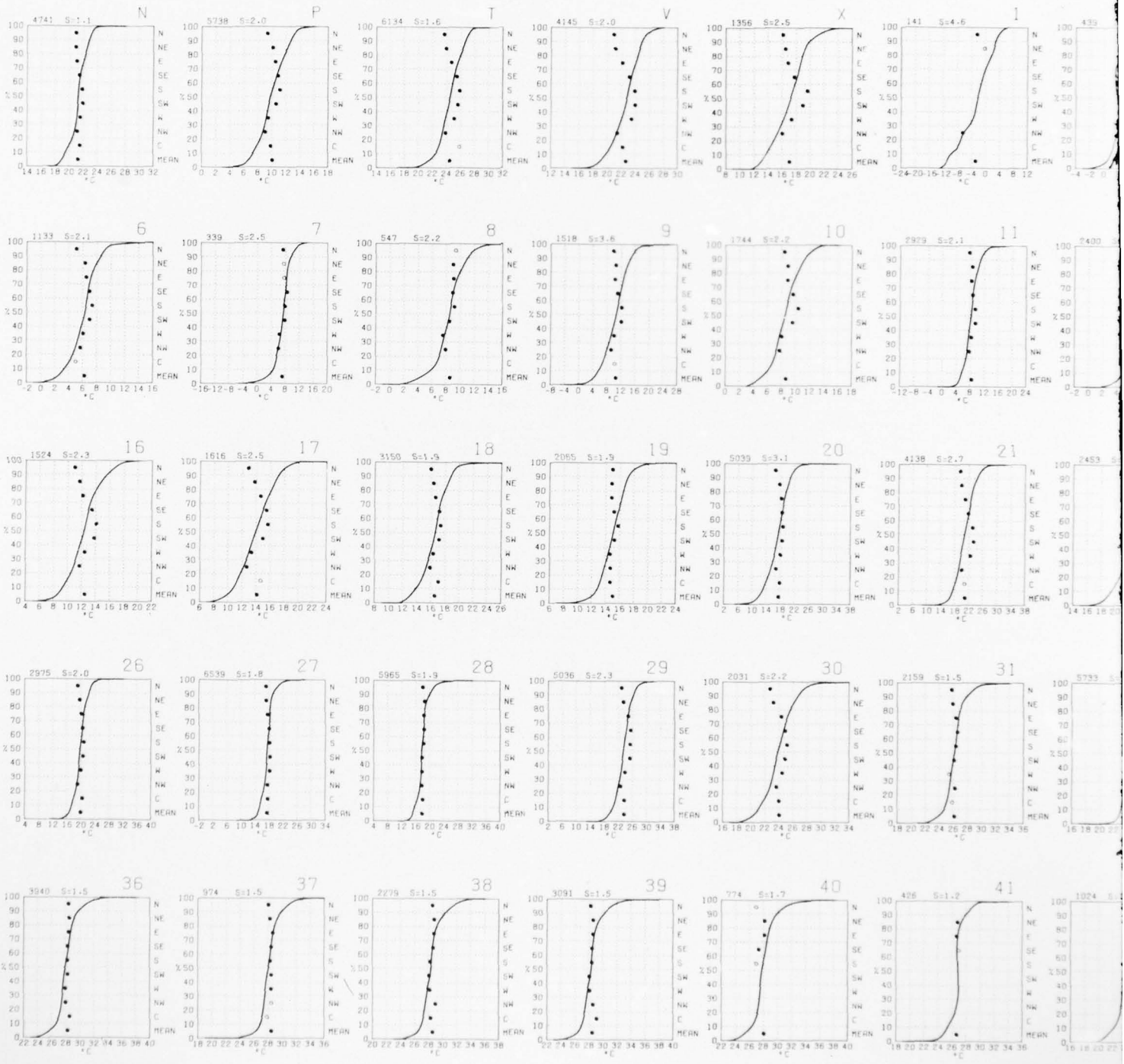
OCTOBER


Air Temperature
Number of observations
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S: Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
% 50
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
170°
160°
70°
60°
50°
40°
30°
20°
10°
N
0°

SURFACE AIR TEMPERATURE

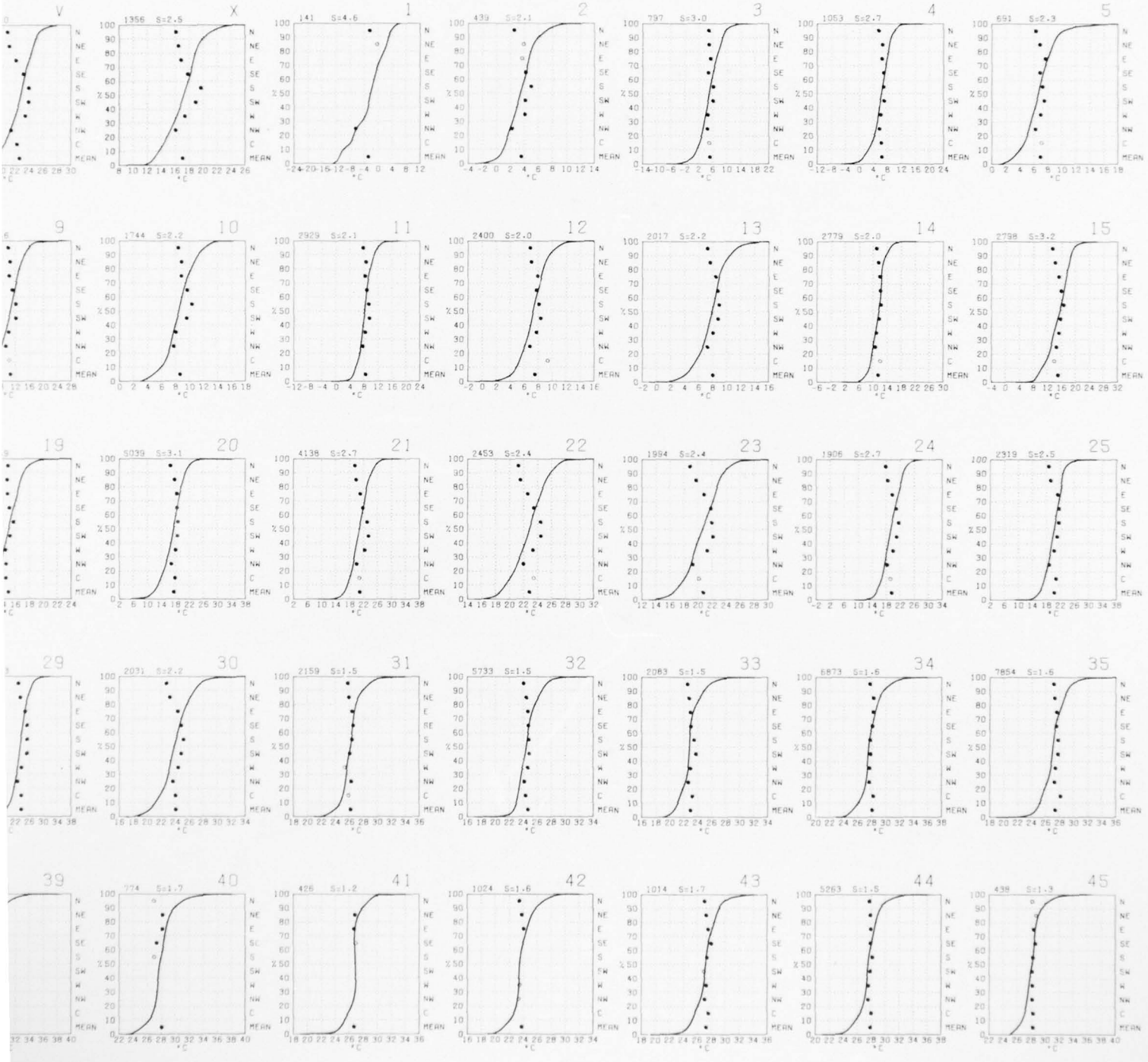


SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without rego
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

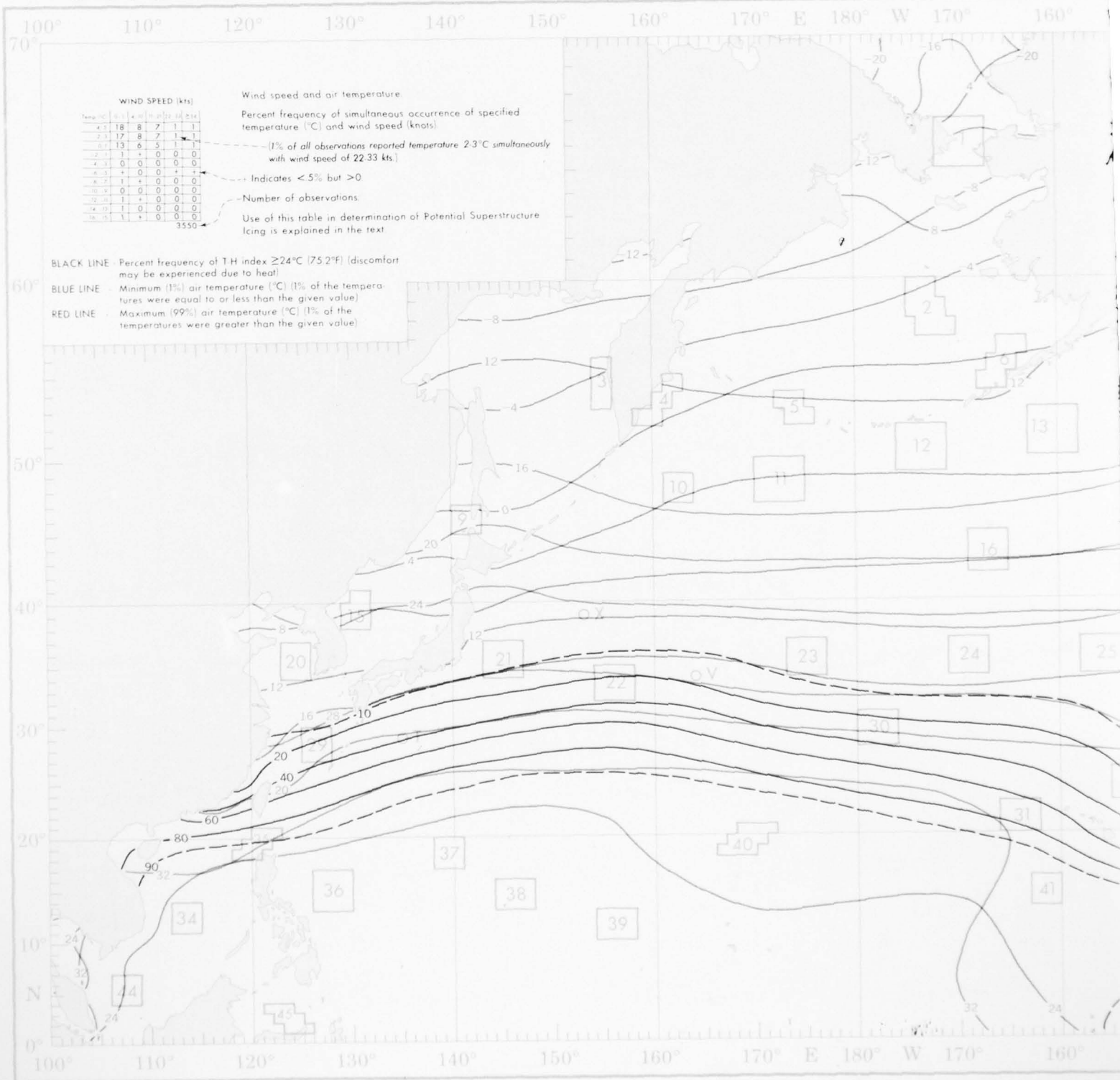
OCTOBER



objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	1	1	+	0
22.23	5	18	18	2	+
20.21	4	20	23	3	+
18.19	+	1	3	1	+
16.17	0	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4741

P

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	+	0
14.15	+	+	1	2	1
12.13	1	3	8	7	2
10.11	1	4	11	13	5
8.9	1	3	10	12	6
6.7	+	1	3	3	1
4.5	0	+	+	+	+
2.3	0	0	+	+	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

5738

T

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	1	1	+	+
26.27	1	9	15	4	+
24.25	1	8	24	8	1
22.23	1	3	13	5	1
20.21	+	1	2	1	+
18.19	+	+	+	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

6134

V

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	+	0	0
26.27	+	2	4	1	+
24.25	1	9	15	5	+
22.23	2	10	18	6	+
20.21	+	4	10	4	1
18.19	+	1	3	1	+
16.17	+	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

4145

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	+	+
22.23	+	+	2	1	1
20.21	+	2	4	4	+
18.19	1	5	16	9	1
16.17	1	4	15	7	2
14.15	1	4	8	3	1
12.13	1	2	4	2	+
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1356

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	4	4	1	0
2.3	0	4	9	1	0
0.1	1	3	4	3	0
-2.-1	0	4	11	2	0
-4.-3	0	4	13	4	0
-6.-5	0	4	4	1	0
-8.-7	1	3	1	1	0
-10.-9	1	1	4	1	0
-12.-11	0	1	3	2	0
-14.-13	1	0	1	0	0
-16.-15	0	0	0	0	0

141

WIND	
TEMP (°C)	0-3
10.11	0
8.9	0
6.7	0
4.5	+
2.3	+
0.1	1
-2.-1	0
-4.-3	0
-6.-5	0
-8.-7	0
-10.-9	0

6

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	+	+	0	0	+
14.15	0	0	0	0	0
12.13	+	1	+	0	0
10.11	1	1	1	+	0
8.9	2	7	7	5	1
6.7	3	8	17	13	3
4.5	2	4	8	7	1
2.3	1	1	2	2	1
0.1	0	0	+	1	0
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0

1133

7

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	0	0	0	0
12.13	0	1	1	1	0
10.11	1	2	4	4	1
8.9	1	11	15	6	1
6.7	2	6	14	7	4
4.5	+	2	4	3	1
2.3	+	1	1	2	1
0.1	0	+	+	+	1
-2.-1	0	0	0	+	0
-4.-3	0	0	0	+	0
-6.-5	0	0	+	0	0

339

8

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	1	+	+
12.13	0	2	3	2	1
10.11	1	3	11	6	2
8.9	1	8	17	8	6
6.7	1	3	8	6	3
4.5	0	1	2	1	1
2.3	0	0	1	1	0
0.1	0	0	+	0	0
-2.-1	0	0	+	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

547

9

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	0	+	0	0
20.21	0	+	+	0	0
18.19	+	+	1	+	+
16.17	+	2	3	1	+
14.15	1	5	6	1	+
12.13	2	9	9	3	1
10.11	2	9	8	2	+
8.9	1	6	6	2	+
6.7	1	3	5	2	+
≤5	+	2	3	2	+

1518

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	+	0
14.15	+	+	+	+	+
12.13	+	2	5	3	+
10.11	1	5	13	7	1
8.9	+	5	17	10	3
6.7	1	3	8	8	4
4.5	0	+	1	2	2
2.3	0	+	0	+	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1744

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	0	+	+	0	0
14.15	+	+	1	+	0
12.13	+	2	3	2	1
10.11	+	6	9	6	2
8.9	1	10	16	10	3
6.7	+	4	9	7	4
4.5	+	+	2	1	1
2.3	+	+	+	+	0
0.1	0	0	0	+	0
-2.-1	0	0	+	0	0

2929

WIND	
TEMP (°C)	0-3
14.15	+
12.13	+
10.11	+
8.9	1
6.7	1
4.5	0
2.3	+
0.1	0
-2.-1	0
-4.-3	0
-6.-5	0

16

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	+	1	1	1	+
16.17	+	2	4	3	1
14.15	+	3	8	6	2
12.13	+	7	17	10	3
10.11	+	4	11	7	2
8.9	0	1	2	2	1
6.7	0	+	+	1	+
4.5	0	+	0	+	0
2.3	0	0	0	0	0
-2.-1	0	0	0	0	0

1524

17

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	+	0	+	0
20.21	+	+	+	+	+
18.19	+	2	5	1	+
16.17	+	5	10	6	1
14.15	+	6	11	8	2
12.13	1	5	10	7	2
10.11	+	1	4	4	1
8.9	0	+	1	1	+
6.7	0	0	0	0	+
4.5	0	0	0	0	0
2.3	0	0	0	0	0

1617

18

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	+	0	0
22.23	+	+	+	0	0
20.21	+	1	2	1	0
18.19	+	9	14	5	1
16.17	2	13	19	7	1
14.15	+	6	9	3	1
12.13	+	1	2	1	+
10.11	0	+	+	+	+
8.9	0	0	0	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0

3152

19

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	0	+	0	0
20.21	0	+	+	0	0
18.19	+	2	4	2	+
16.17	2	9	19	6	1
14.15	2	10	16	7	1
12.13	1	3	7	3	1
10.11	+	+	1	1	+
8.9	0	0	+	+	+
6.7	0	+	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

2065

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	+	+	0	0	0
26.27	+	+	+	0	0
24.25	+	1	+	+	0
22.23	1	4	1	+	0
20.21	3	10	4	1	+
18.19	4	15	8	2	+
16.17	3	12	7	2	+
14.15	1	6	4	1	+
≤13	1	3	3	2	+

5040

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	0	0	0
28.29	0	+	+	+	+
26.27	+	+	1	1	+
24.25	+	2	6	2	1
22.23	1	7	13	6	1
20.21	+	7	12	6	1
18.19	+	5	8	5	1
16.17	+	2	3	2	1
14.15	+	+	1	+	+
≤13	+	0	+	+	0

4138

WIND	
TEMP (°C)	0-3
30.31	0
28.29	0
26.27	+
24.25	1
22.23	1
20.21	1
18.19	+
16.17	+
14.15	0
12.13	0
10.11	0

26

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	+	+	0	0
28.29	0	+	0	+	0
26.27	+	+	+	0	0
24.25	+	1	1	+	+
22.23	1	6	9	3	+
20.21	2	15	17	5	1
18.19	1	11	13	4	+
16.17	+	3	3	2	+
14.15	0	+	+	+	+
12.13	0	+	+	+	+
10.11	0	0	0	0	0

2976

27

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	0	+	+	0	0
24.25	+	+	+	+	0
22.23	+	1	1	+	0
20.21	1	4	4	1	+
18.19	3	17	16	4	+
16.17	3	15	17	7	+
14.15	+	2	3	1	+
12.13	0	+	+	+	+
10.11	0	+	0	0	0
8.9	0	+	0	0	0

6539

28

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	+	0	0
26.27	+	+	+	0	0
24.25	+	+	+	+	0
22.23	+	2	1	+	0
20.21	1	6	4	+	0
18.19	4	19	16	2	+
16.17	4	16	16	3	+
14.15	+	2	2	+	+
12.13	+	+	+	+	0
10.11	0	0	0	0	0

5966

29

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	+	+	+	0	0
28.29	+	1	2	+	+
26.27	1	7	9	2	+
24.25	1	10	15	6	1
22.23	1	8	14	6	1
20.21	+	3	5	2	+
18.19	+	1	2	1	+
16.17	0	+	+	+	+
14.15	0	+	+	+	0
12.13	+	0	+	+	0

5037

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	+	0	0
28.29	1	2	2	+	0
26.27	1	9	8	1	0
24.25	2	13	15	3	+
22.23	1	10	15	5	+
20.21	+	2	4	2	+
18.19	+	+	1	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2031

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	+	+	0	0
30.31	+	1	1	+	0
28.29	1	5	7	1	0
26.27	2	20	31	5	+
24.25	1	8	12	3	+
22.23	+	1	1	+	0
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2162

WIND	
TEMP (°C)	0-3
32.33	0
30.31	+
28.29	+
26.27	2
24.25	3
22.23	1
20.21	+
18.19	0
16.17	0
14.15	0
12.13	0

36

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	0	+	+	0	0
32.33	+	2	1	+	0
30.31	1	7	5	+	+
28.29	4	27	22	4	1
26.27	1	10	8	2	1
24.25	0	1	1	+	+
22.23	0	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3941

37

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	2	1	+	0
30.31	+	7	7	1	+
28.29	3	26	28	5	+
26.27	1	8	7	1	1
24.25	0	+	1	+	0
22.23	0	0	+	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

974

38

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	1	3	2	0	0
30.31	2	7	6	+	0
28.29	5	29	24	4	+
26.27	1	6	7	2	+
24.25	+	+	+	+	+
22.23	0	+	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2219

39

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	1	2	1	0	0
30.31	2	6	3	+	0
28.29	6	31	26	2	+
26.27	1	8	8	1	0
24.25	+	1	+	+	+
22.23	0	0	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3031

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	0	1	0	0
32.33	0	+	3	0	0
30.31	1	2	7	1	0
28.29	2	12	33	4	0
26.27	1	10	18	3	0
24.25	+	1	2	1	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

774

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	0	0
30.31	+	+	0	0	0
28.29	1	7	11	0	0
26.27	1	24	46	3	0
24.25	0	+	4	+	0
22.23	0	0	1	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

426

WIND	
TEMP (°C)	0-3
30.31	0
28.29	+
26.27	+
24.25	+
22.23	1
20.21	+
18.19	0
16.17	0
14.15	0
12.13	0
10.11	0

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

PERATURE

OCTOBER

V

SPEED (KTS)				
4-10	11-21	22-33	≥ 34	
0	+	0	0	
2	4	1	+	
9	15	5	+	
10	18	6	+	
4	10	4	1	
1	3	1	+	
+	+	+	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

4145

X

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.26	0	0	+	+	+
22.23	+	+	2	1	1
20.21	+	2	4	4	+
18.19	1	5	16	9	1
16.17	1	4	15	7	2
14.15	1	4	8	3	1
12.13	1	2	4	2	+
10.11	0	+	+	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1356

1

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	4	4	1	0
2.3	0	4	9	1	0
0.1	1	3	4	3	0
-2.-1	0	4	11	2	0
-4.-3	0	4	13	4	0
-6.-5	0	4	4	1	0
-8.-7	1	3	1	1	0
-10.-9	1	1	4	1	0
-12.-11	0	1	3	2	0
-14.-13	1	0	1	0	0
-16.-15	0	0	0	0	0

141

2

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	+	0
8.9	0	+	1	1	0
6.7	0	+	6	8	1
4.5	+	4	10	15	5
2.3	+	6	13	11	3
0.1	1	3	5	4	+
-2.-1	0	+	0	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

439

3

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	0	+	0
12.13	+	1	1	+	+
10.11	+	2	3	1	1
8.9	1	4	5	4	1
6.7	2	7	10	5	1
4.5	2	7	12	4	2
2.3	1	6	6	2	1
0.1	+	3	3	1	1
-2.-1	0	1	1	0	0
-4.-3	0	1	+	0	0
-6.-5	0	+	+	0	0

797

4

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	0	0	+	0	0
14.15	0	+	+	0	0
12.13	+	1	+	+	+
10.11	1	2	4	2	+
8.9	2	6	10	5	1
6.7	3	8	14	4	2
4.5	3	6	9	5	1
2.3	1	2	2	1	+
0.1	+	1	1	1	+
≤-1	0	+	1	+	0

1053

5

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	+	+
14.15	+	0	+	+	0
12.13	+	+	1	0	0
10.11	+	4	4	1	+
8.9	3	8	8	4	2
6.7	4	10	14	7	2
4.5	1	6	9	4	1
2.3	1	1	2	1	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

691

9

SPEED (KTS)				
4-10	11-21	22-33	≥ 34	
+	+	0	0	
0	+	0	0	
+	+	0	0	
+	1	+	+	
2	3	1	+	
5	6	1	+	
9	9	3	1	
9	8	2	+	
6	6	2	+	
3	5	2	+	
2	3	2	+	

1518

10

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	+	0
14.15	+	+	+	+	0
12.13	+	2	5	3	+
10.11	1	5	13	7	1
8.9	+	5	17	10	3
6.7	1	3	8	8	4
4.5	0	+	1	2	2
2.3	0	+	0	+	1
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1744

11

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	0	0
16.17	0	+	+	0	0
14.15	+	+	1	+	0
12.13	+	2	3	2	1
10.11	+	6	9	6	2
8.9	1	10	16	10	3
6.7	+	4	9	7	4
4.5	+	+	2	1	1
2.3	+	+	1	1	+
0.1	0	0	0	+	0
-2.-1	0	0	+	0	0

2929

12

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	+	+	+	+	0
12.13	+	+	1	1	+
10.11	+	3	6	4	1
8.9	1	6	16	11	4
6.7	1	6	14	11	4
4.5	0	2	3	3	1
2.3	+	+	1	1	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

2400

13

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	+	+	0	0
14.15	+	+	+	0	+
12.13	+	1	2	1	1
10.11	+	3	8	6	2
8.9	1	6	16	13	3
6.7	+	3	10	9	4
4.5	+	1	2	3	2
2.3	0	+	+	1	1
0.1	0	+	0	+	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

2017

14

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	0	0	0	0
18.19	0	+	+	+	0
16.17	+	1	1	1	+
14.15	+	2	5	4	1
12.13	1	8	18	12	3
10.11	+	5	12	8	2
8.9	+	2	5	4	1
6.7	+	+	1	1	+
4.5	0	+	0	+	0
2.3	0	0	0	+	+
0.1	0	0	0	0	0

2779

15

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	0	+	0
24.25	+	+	+	+	0
22.23	+	1	+	0	0
20.21	+	2	3	+	+
18.19	1	8	10	1	+
16.17	1	12	12	2	+
14.15	1	6	8	2	+
12.13	1	6	8	2	+
10.11	1	3	4	1	+
8.9	1	1	2	1	+
≤7	0	+	+	+	0

2798

19

SPEED (KTS)				
4-10	11-21	22-33	≥ 34	
0	+	0	0	
+	+	+	0	
2	4	2	+	
9	19	6	1	
10	16	7	1	
3	7	3	1	
+	1	1	+	
0	+	+	+	
+	0	0	0	
0	0	0	0	
0	0	0	0	

2065

20

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	+	+	0	0	0
26.27	+	+	+	0	0
24.25	+	1	+	+	0
22.23	1	4	1	+	0
20.21	3	10	4	1	+
18.19	4	15	8	2	+
16.17	3	12	7	2	+
14.15	1	6	4	1	+
≤13	1	3	3	2	+

5040

21

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	+	0	0	0
28.29	0	+	+	+	+
26.27	+	1	3	1	+
24.25	+	2	6	2	1
22.23	1	7	13	6	1
20.21	+	7	12	6	1
18.19	+	5	8	5	1
16.17	+	2	3	2	1
14.15	+	+	1	+	+
≤13	+	0	+	+	0

4138

22

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	1	1	+	+
26.27	+	5	8	3	+
24.25	1	7	11	5	1
22.23	1	7	15	8	1
20.21	1	4	9	4	1
18.19	+	2	3	2	+
16.17	+	+	+	+	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2454

23

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	+	0
26.27	+	1	1	0	0
24.25	1	4	5	1	+
22.23	1	11	13	3	+
20.21	1	8	14	5	+
18.19	+	4	10	6	1
16.17	+	1	4	2	+
14.15	0	+	+	1	0
12.13	0	+	+	+	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1994

24

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	0	+	0
26.27	+	+	1	+	0
24.25	+	2	2	1	+
22.23	1	6	8	4	+
20.21	1	7	11	4	+
18.19	1	7	12	6	1
16.17	1	3	9	5	1
14.15	0	1	2	1	+
12.13	0	+	+	+	+
10.11	0	0	+	+	0
8.9	0	0	0	0	0

1907

25

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	+	0	0	0	0
28.29	+	0	+	0	0
26.27	+	+	+	+	0
24.25	+	2	3	1	+
22.23	1	8	13	4	1
20.21	1	9	13	5	1
18.19	1	7	9	5	1
16.17	+	2	5	3	+
14.15	+	+	1	1	+
12.13	0	0	+	+	+
≤11	0	0	+	0	0

2320

29

SPEED (KTS)				
4-10	11-21	22-33	≥ 34	
0	+	0	0	
+	+	0	0	
1	2	+	+	
7	9	2	+	
10	15	6	1	
8	14	6	1	
3	5	2	+	
1	2	1	+	
+	+	+	+	
+	+	0	0	
0	+	+	0	

5037

30

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	+	0	0
28.29	1	2	2	+	0
26.27	1	9	8	1	0
24.25	2	13	15	3	+
22.23	1	10	15	5	+
20.21	+	2	4	2	+
18.19	+	+	1	+	+
16.17	0	0	0	0	+
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2031

31

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	+	+	0	0
30.31	+	1	1	+	0
28.29	1	5	7	1	0
26.27	2	20	31	5	+
24.25	1	8	12	3	+
22.23	+	1	1	+	0
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2162

32

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	2	+	0
26.27	2	8	14	1	0
24.25	3	15	29	3	+
22.23	1	7	11	2	+
20.21	+	+	+	+	0
18.19	0	+	0	0	0
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

5736

33

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	+	+	0	0
26.27	1	3	2	+	0
24.25	1	9	12	1	0
22.23	4	18	33	4	+
20.21	+	3	7	1	+
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

2083

34

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	+	0	0
34.35	+	+	+	0	0
32.33	+	1	1	+	0
30.31	2	6	4	+	0
28.29	5	24	18	2	+
26.27	3	13	14	3	+
24.25	+	1	1	+	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

35

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	+	+	+	0	0
30.31	+	+	1	+	0
28.29	+	1	3	+	0
26.27	+	1	4	+	0
24.25	+	2	5	+	0
22.23	1	3	6	+	0
20.21	1	3	6	+	0
18.19	1	3	5	+	0
16.17	+	2	4	+	0
14.15	+	1	2	+	0
12.13	+	+	1	+	0

3397

39

SPEED (KTS)				
4-10	11-21	22-33	≥ 34	
+	+	0	0	
0	+	0	0	
2	1	0	0	
6	3	+	0	
31	26	2	+	
8	8	1	0	
1	+	+	+	
0	+	0	0	
0	0	0	0	
0	0	0	0	
0	0	0	0	

3091

40

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	0	1	0	0
32.33	0	+	3	0	0
30.31	1	2	7	1	0
28.29	2	12	33	4	0
26.27	1	10	18	3	0
24.25	+	1	2	1	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

774

41

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	0	0	0	0
30.31	+	+	0	0	0
28.29	1	7	11	0	0
26.27	1	24	46	3	0
24.25	0	+	4	+	0
22.23	0	0	1	0	0
20.21	0	+	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

426

42

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	+	1	2	0	0
26.27	+	3	8	1	0
24.25	+	13	23	3	0
22.23	1	13	26	2	+
20.21	+	2	2	+	0
18.19	0	+	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1024

43

WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	0	0	0
32.33	+	1	+	0	0
30.31	1	3	1	+	0
28.29	4	18	12	1	0
26.27	5	29	15	1	+
24.25	1	4	1	+	0
22.23	+	+	+	+	0
20.21	0	+	0	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1018

44

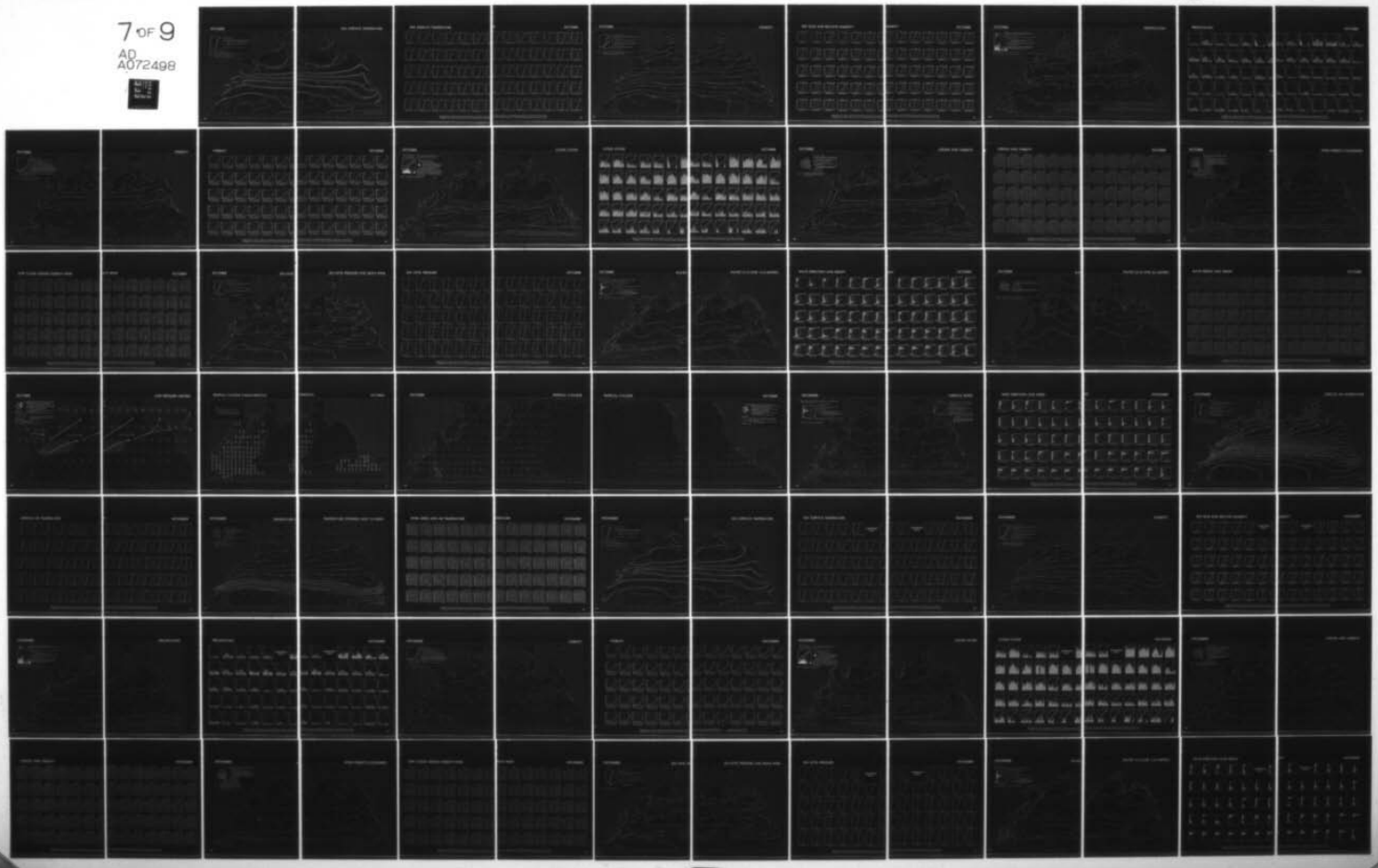
WIND SPEED (KTS)					
TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	+	+	0	0
32.33	+	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	2	+	0
26.27	+	2	4	+	0
24.25	+	2	4	+	0
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16.17	+	2	4	+	0

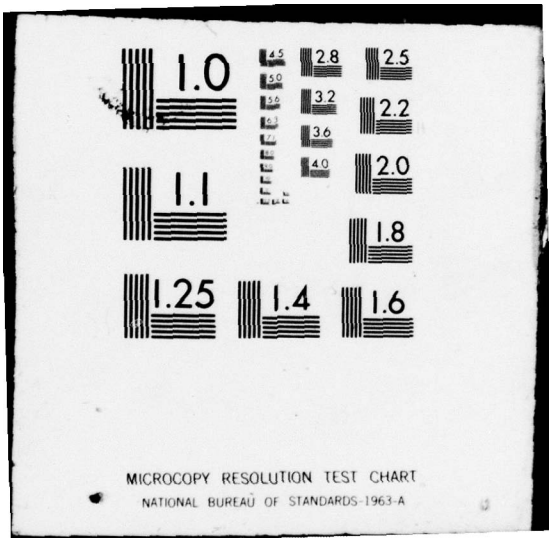
1007

he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

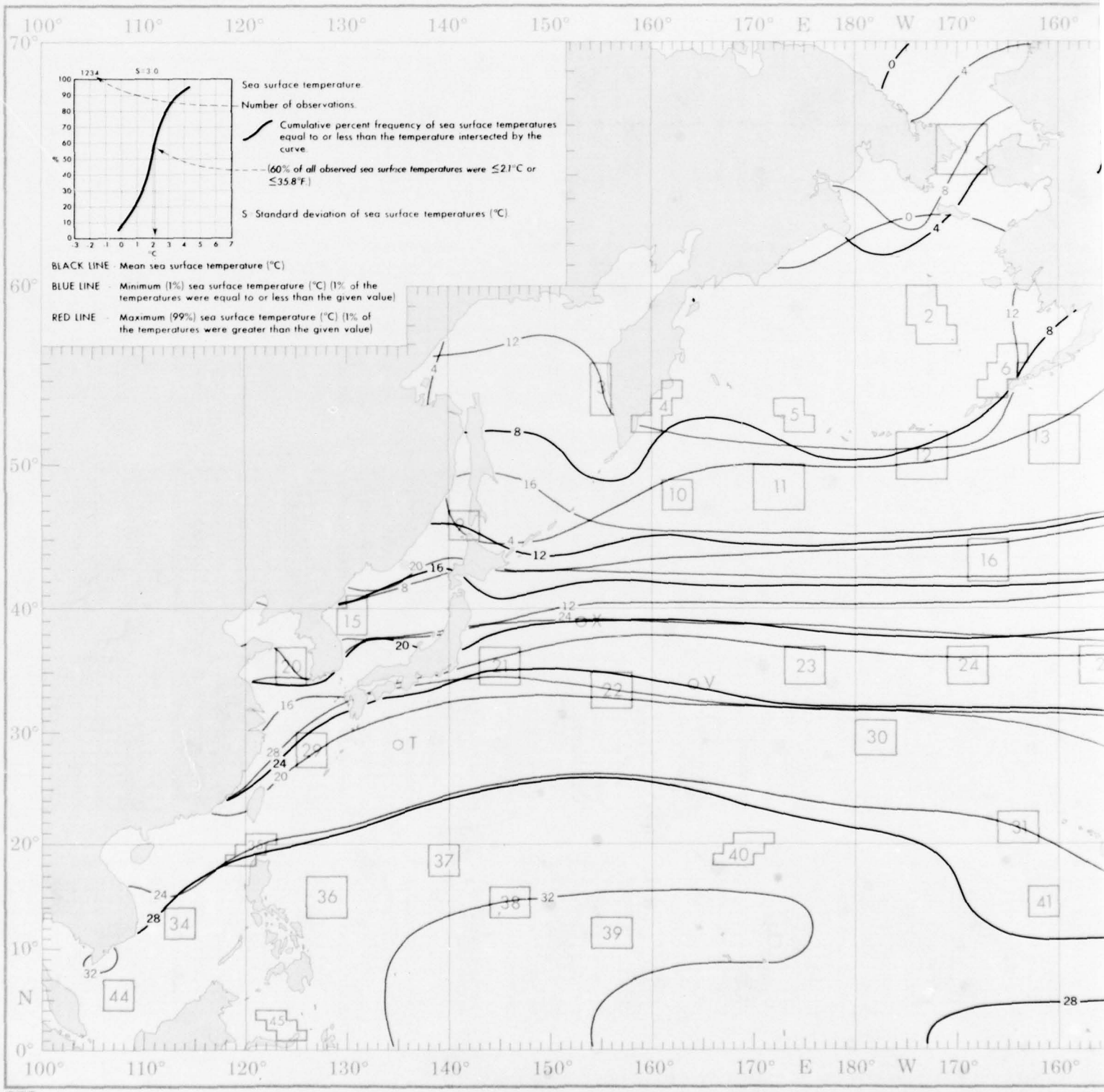
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U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
MAR 77
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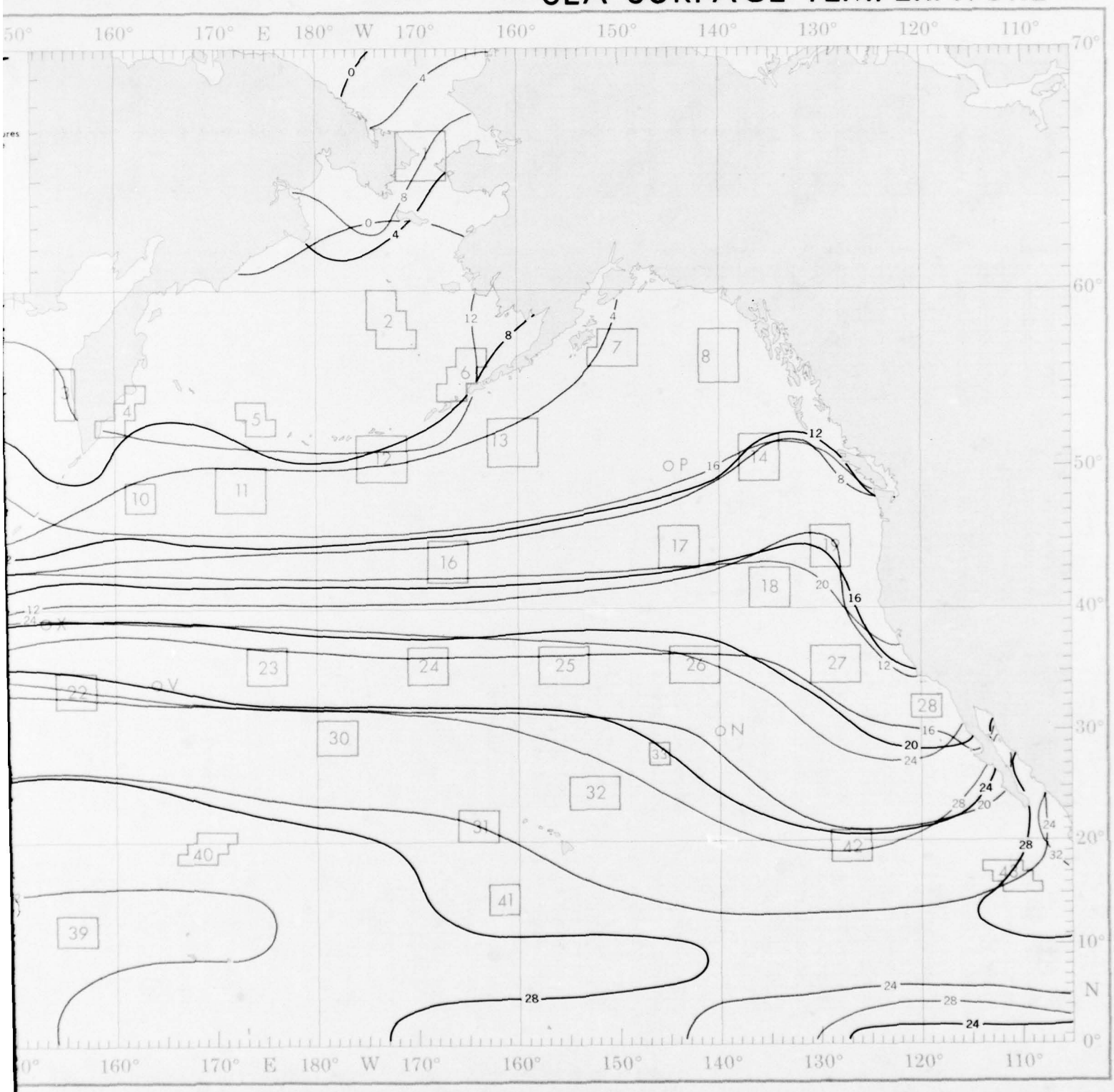



1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
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4.0
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5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

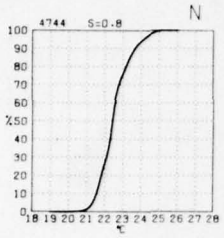
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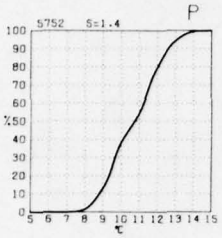

1234
S=3.0
Sea surface temperature.
Number of observations.
Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.
(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)
S: Standard deviation of sea surface temperatures (°C).
BLACK LINE - Mean sea surface temperature (°C).
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value).
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value).
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

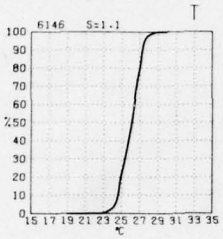
SEA SURFACE TEMPERATURE

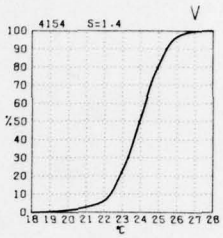


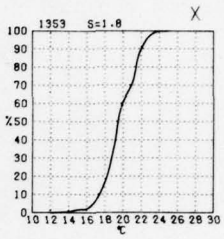
SEA SURFACE TEMPERATURE

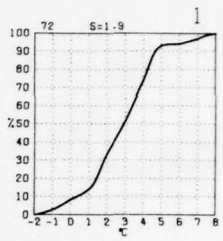


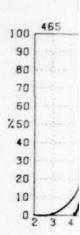


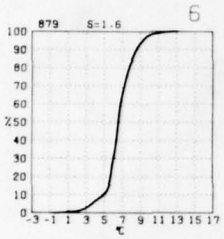


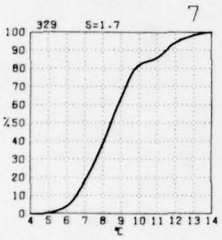


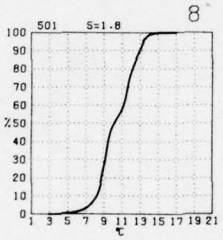


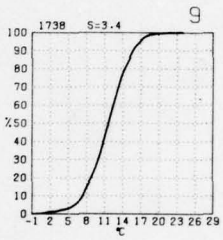


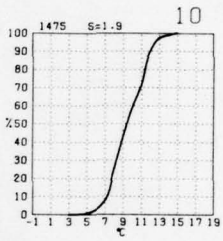


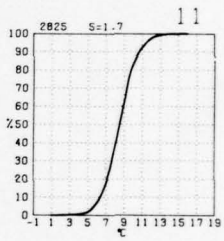


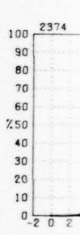


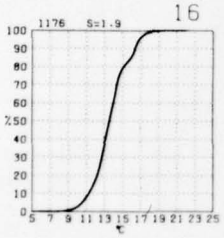


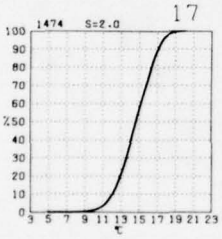


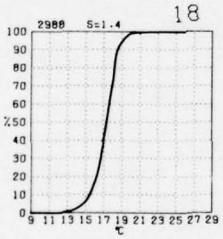


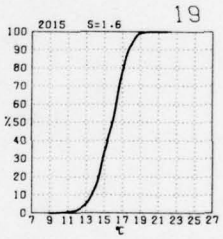


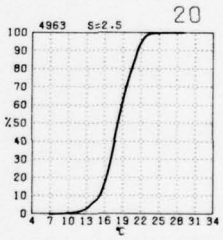


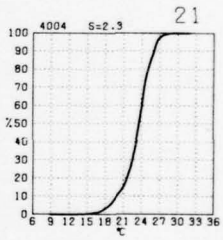


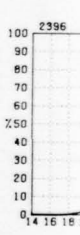


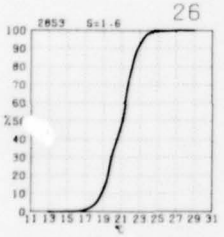


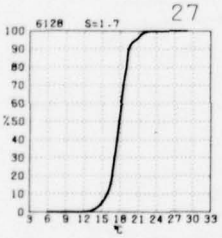


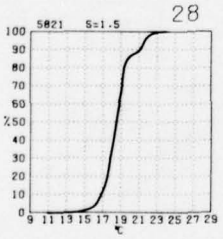


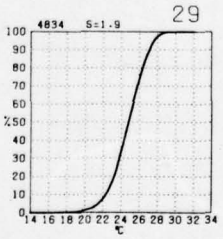


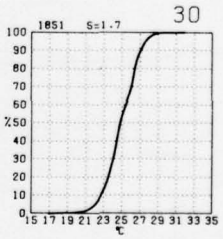


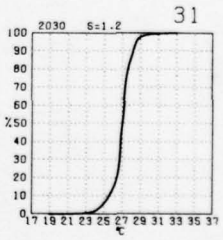


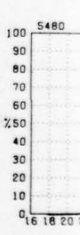


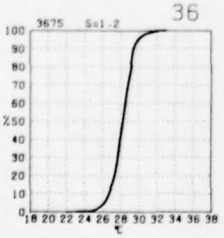


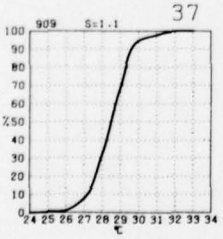


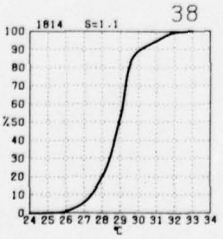


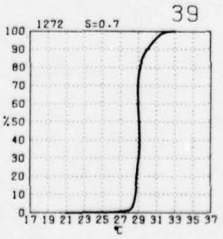


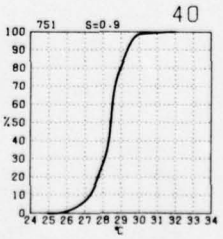


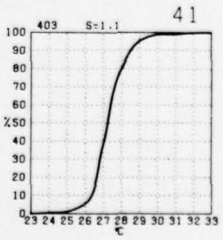


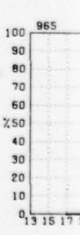








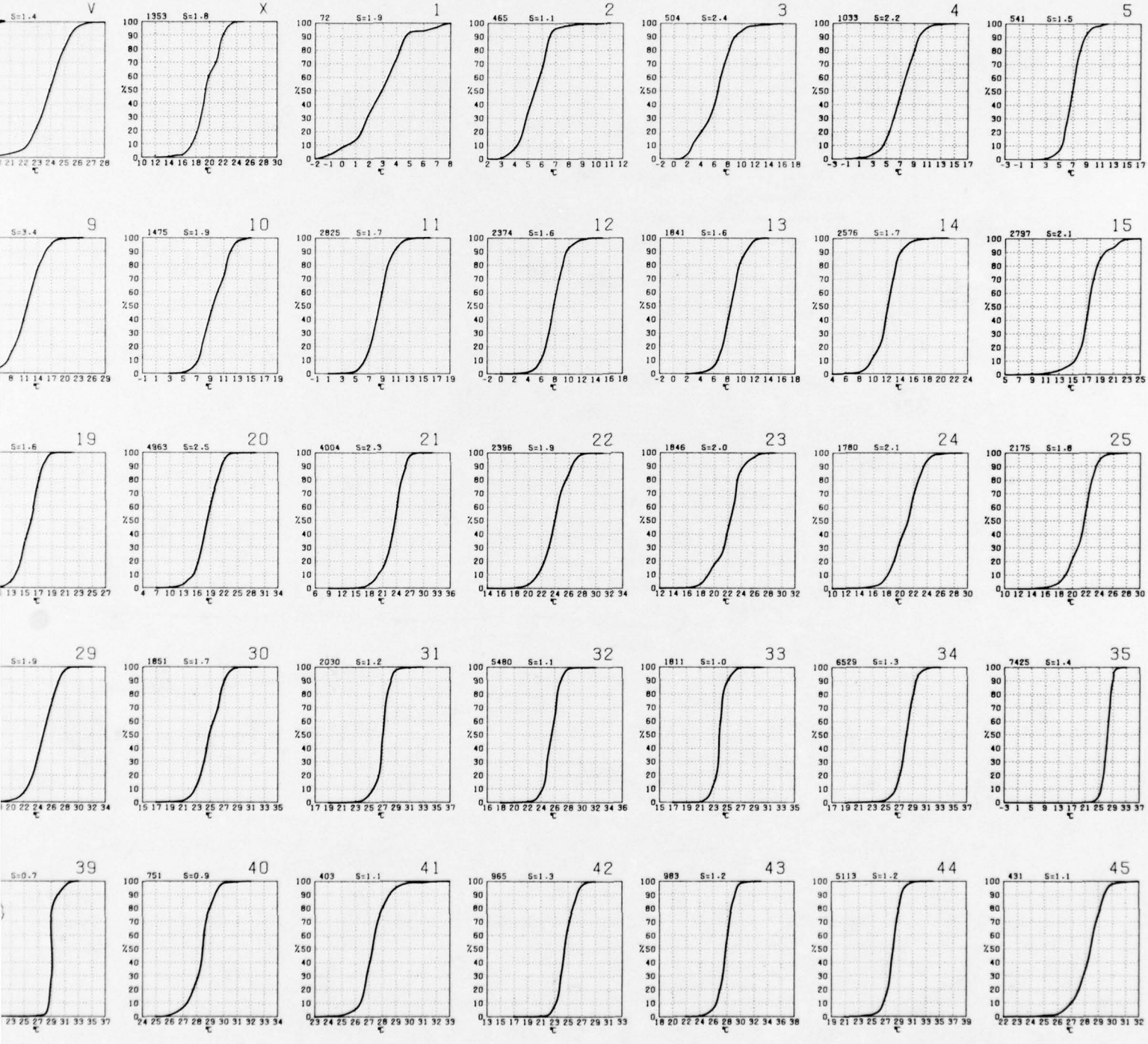




Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

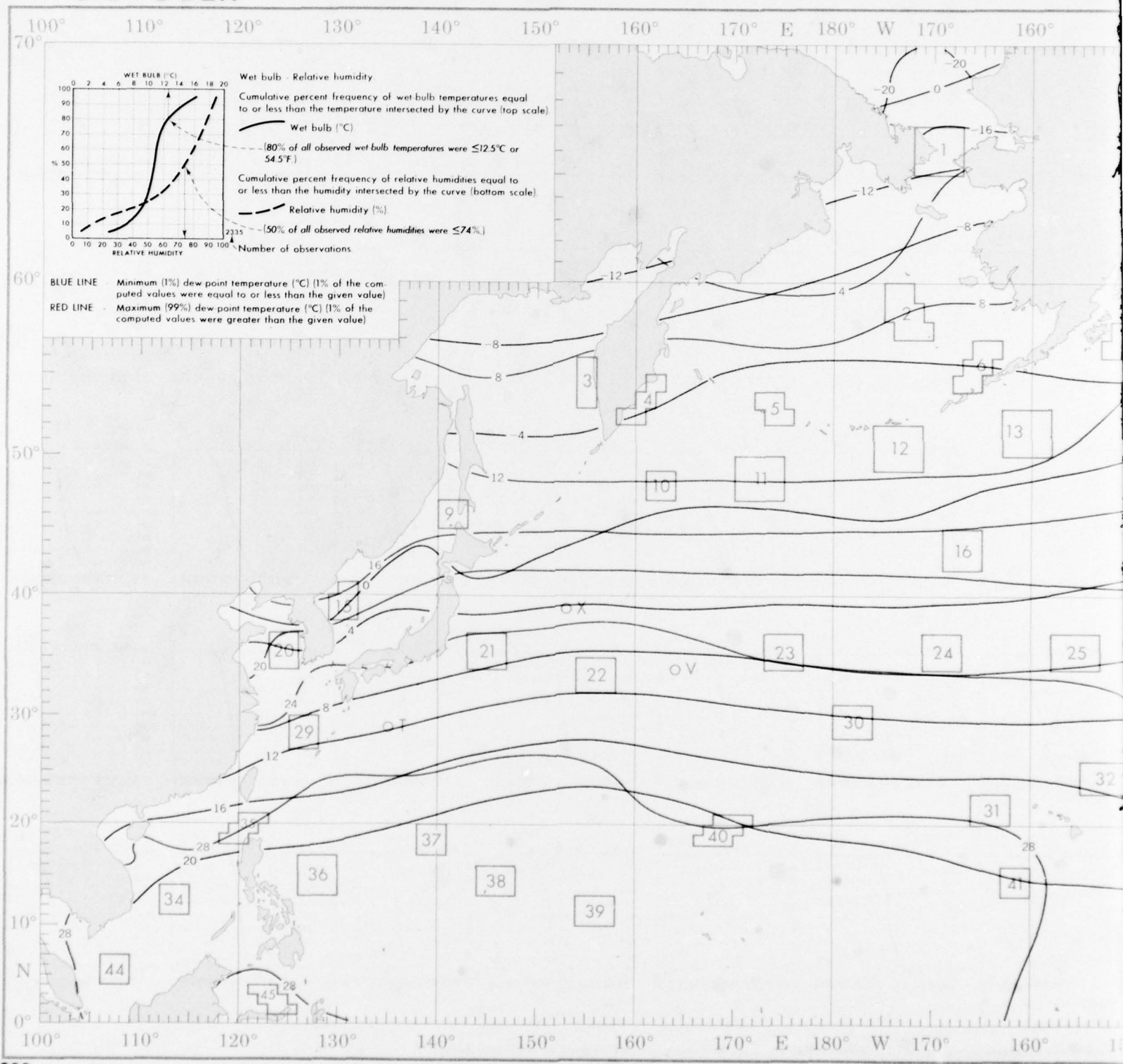
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OCTOBER

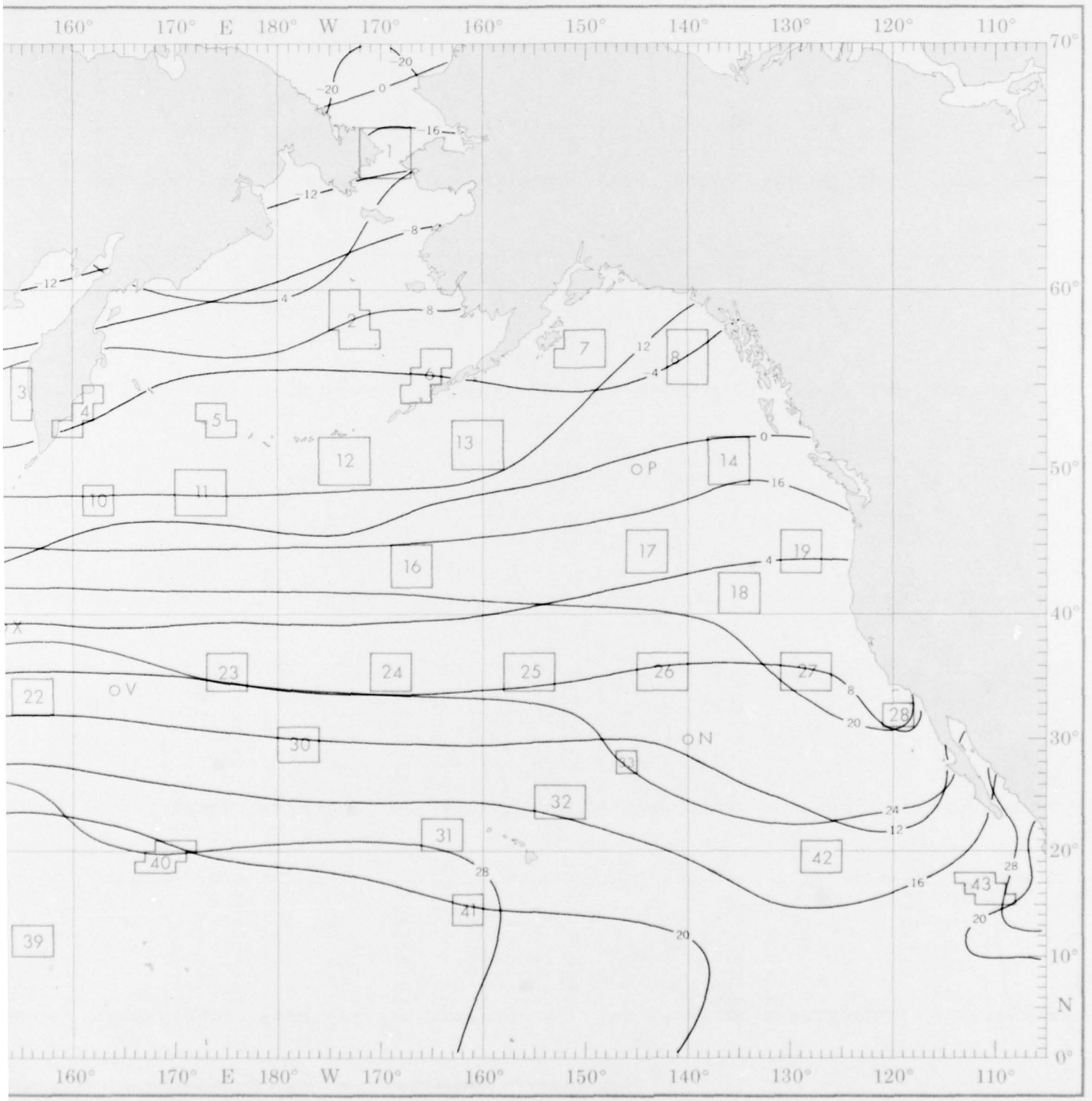


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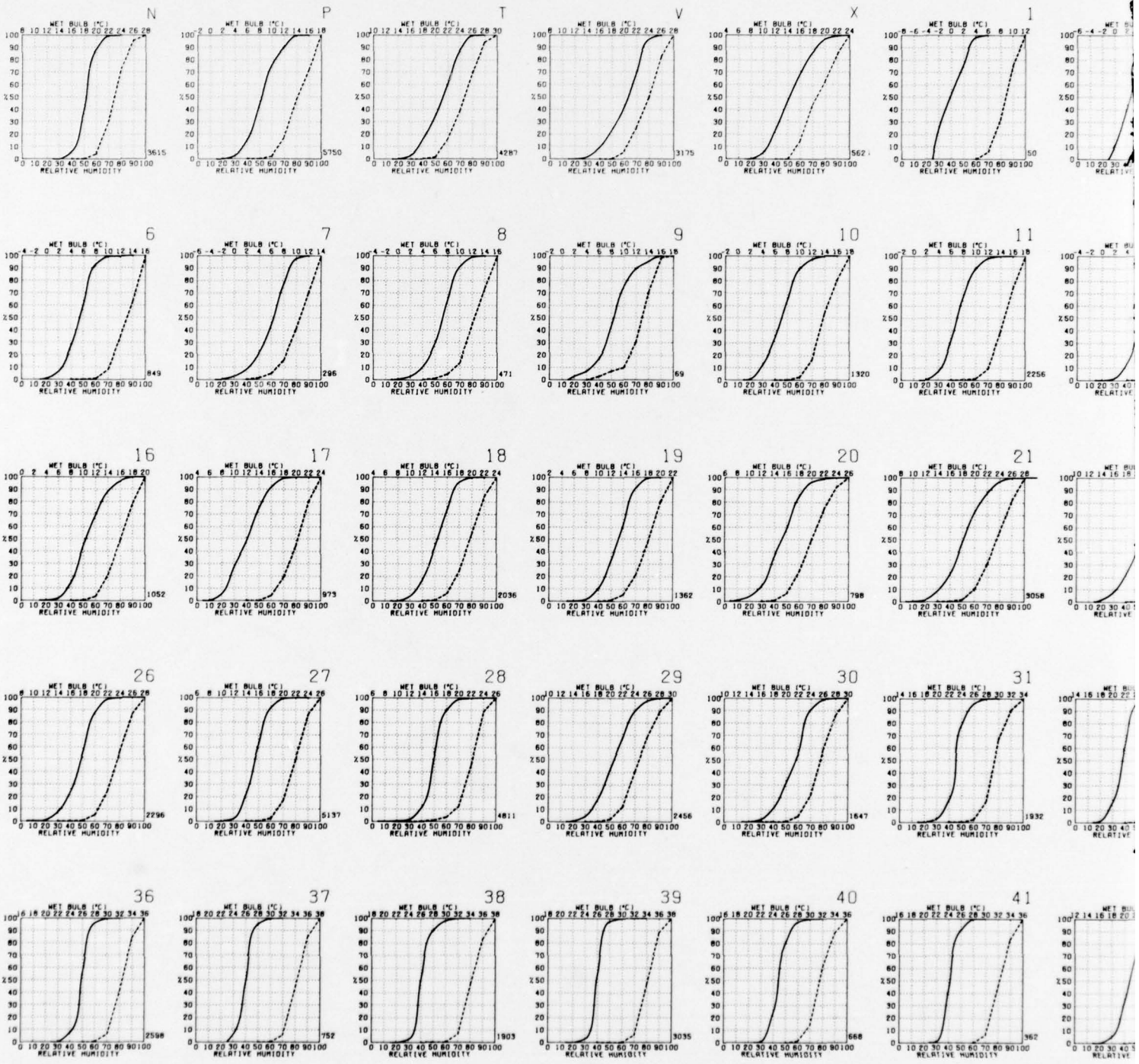
OCTOBER


WET BULB (°C)
0 2 4 6 8 10 12 14 16 18 20
100 90 80 70 60 % 50 40 30 20 10 0
0 10 20 30 40 50 60 70 80 90 100
RELATIVE HUMIDITY
2335
Wet bulb - Relative humidity
Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale)
Wet bulb (°C)
(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)
Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale)
Relative humidity (%)
(50% of all observed relative humidities were ≤74%.)
Number of observations
BLUE LINE - Minimum (1%) dew point temperature (°C) (1% of the computed values were equal to or less than the given value)
RED LINE - Maximum (99%) dew point temperature (°C) (1% of the computed values were greater than the given value)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

HUMIDITY


160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
-20 -20 0 -16 -12 -8 -12 4 8 8 12 4 0 16 4 8 20 24 12 28 16 20
1 2 3 4 5 7 8 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 39 40 41 42 43
O P O V O N X

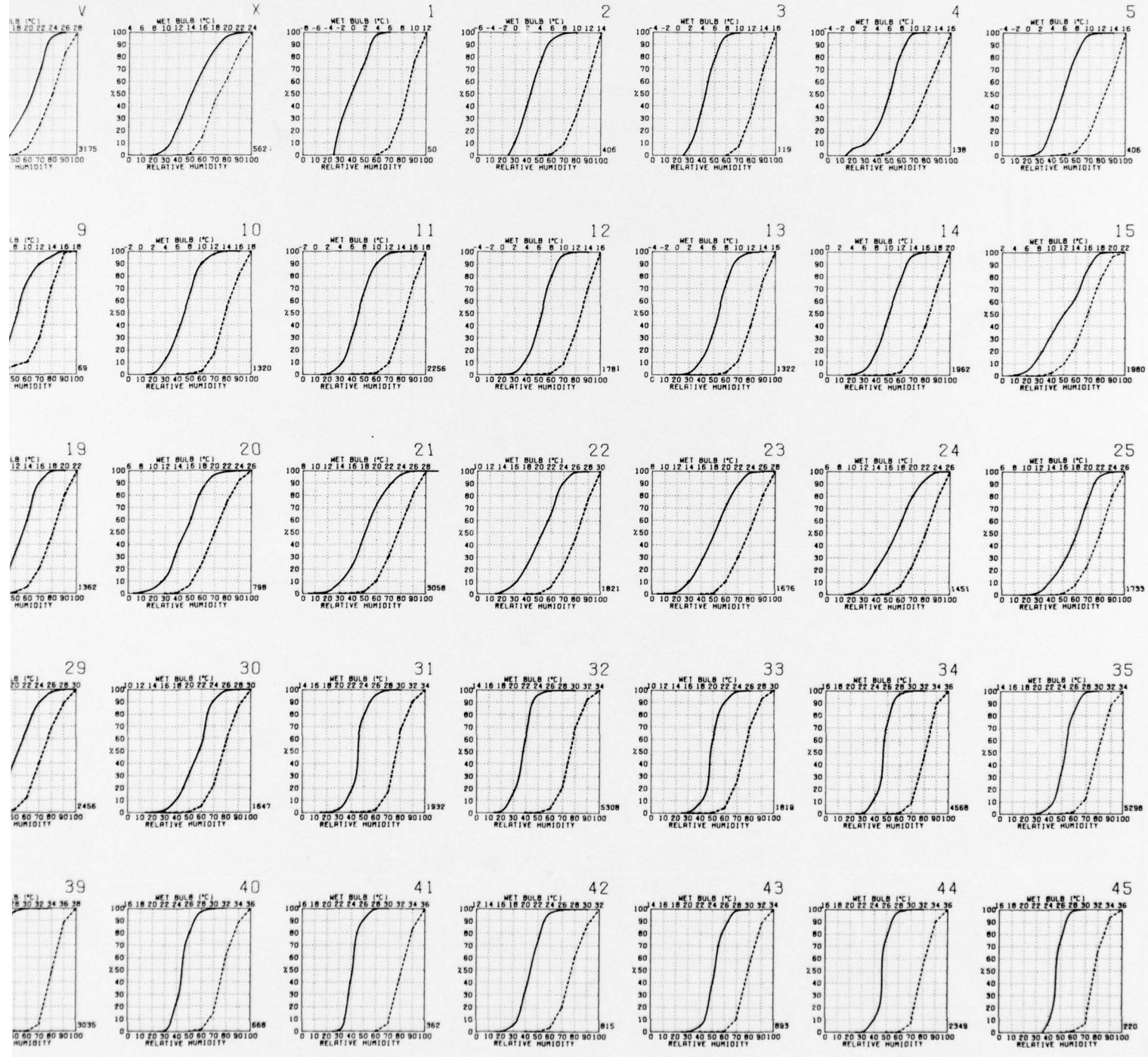
WET BULB AND RELATIVE HUMIDITY



Graphs represent the objective compilation of available data for specified areas without regar
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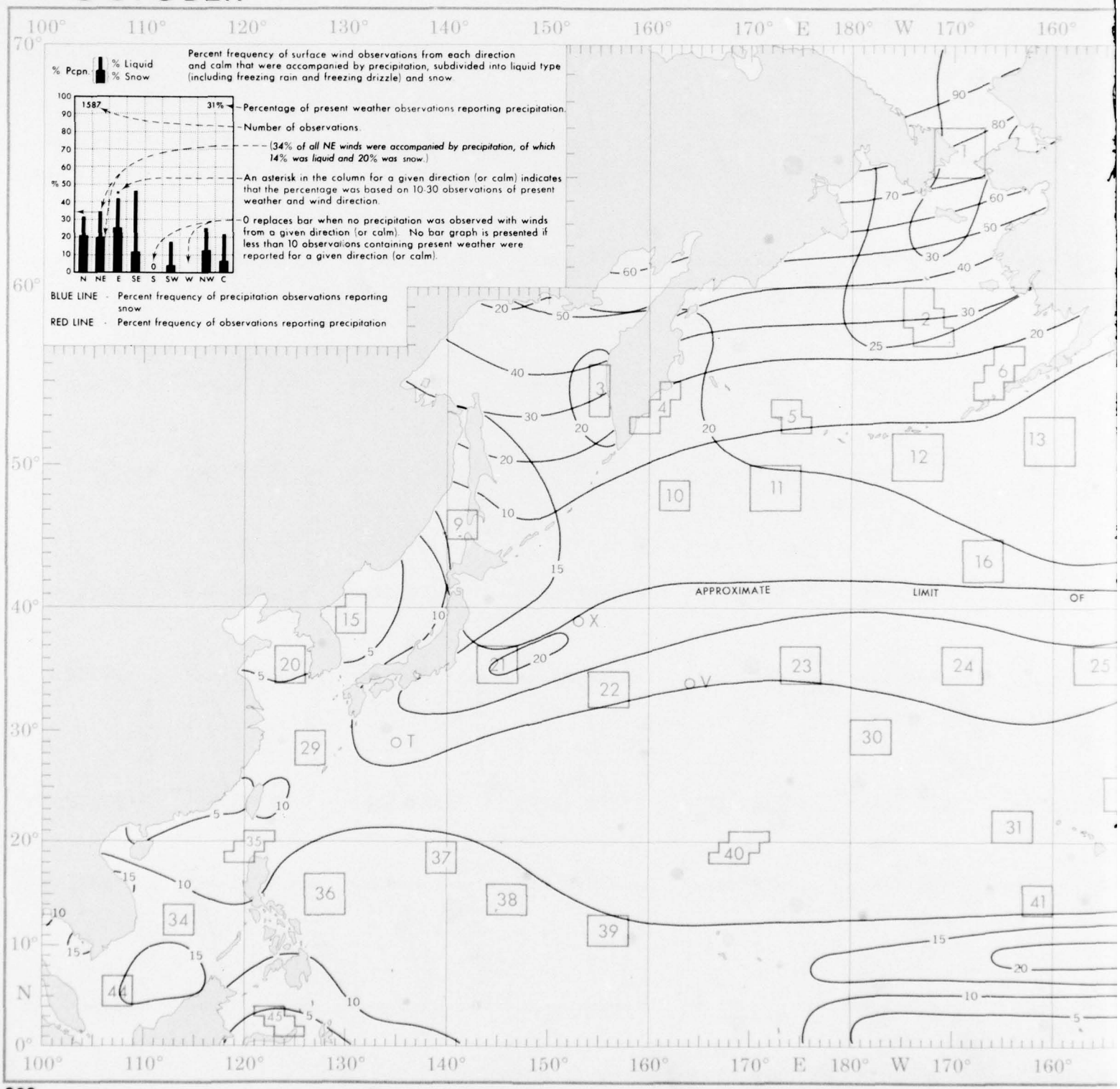
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OCTOBER



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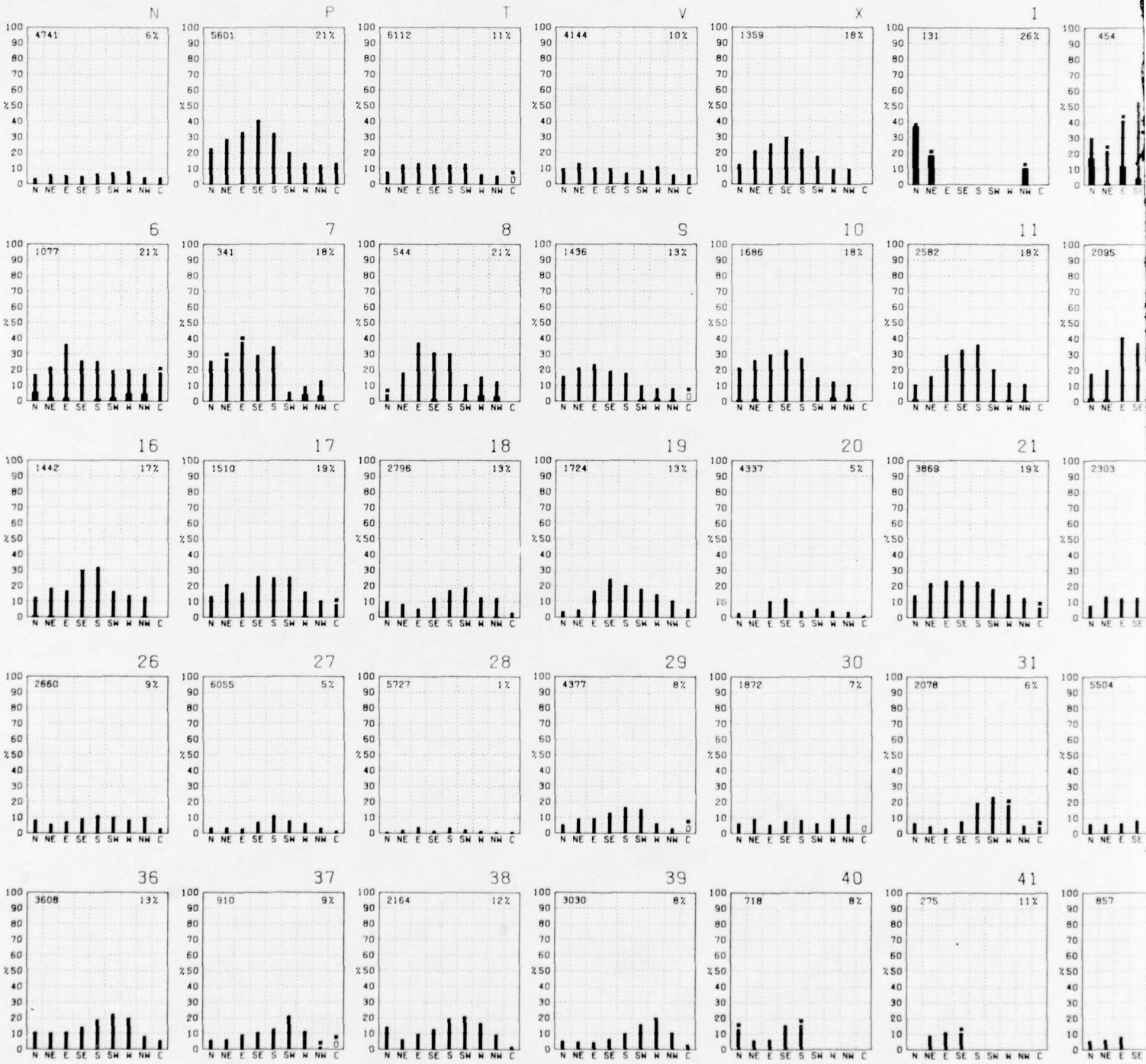
OCTOBER


% Pcpn.
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
APPROXIMATE LIMIT OF

PRECIPITATION

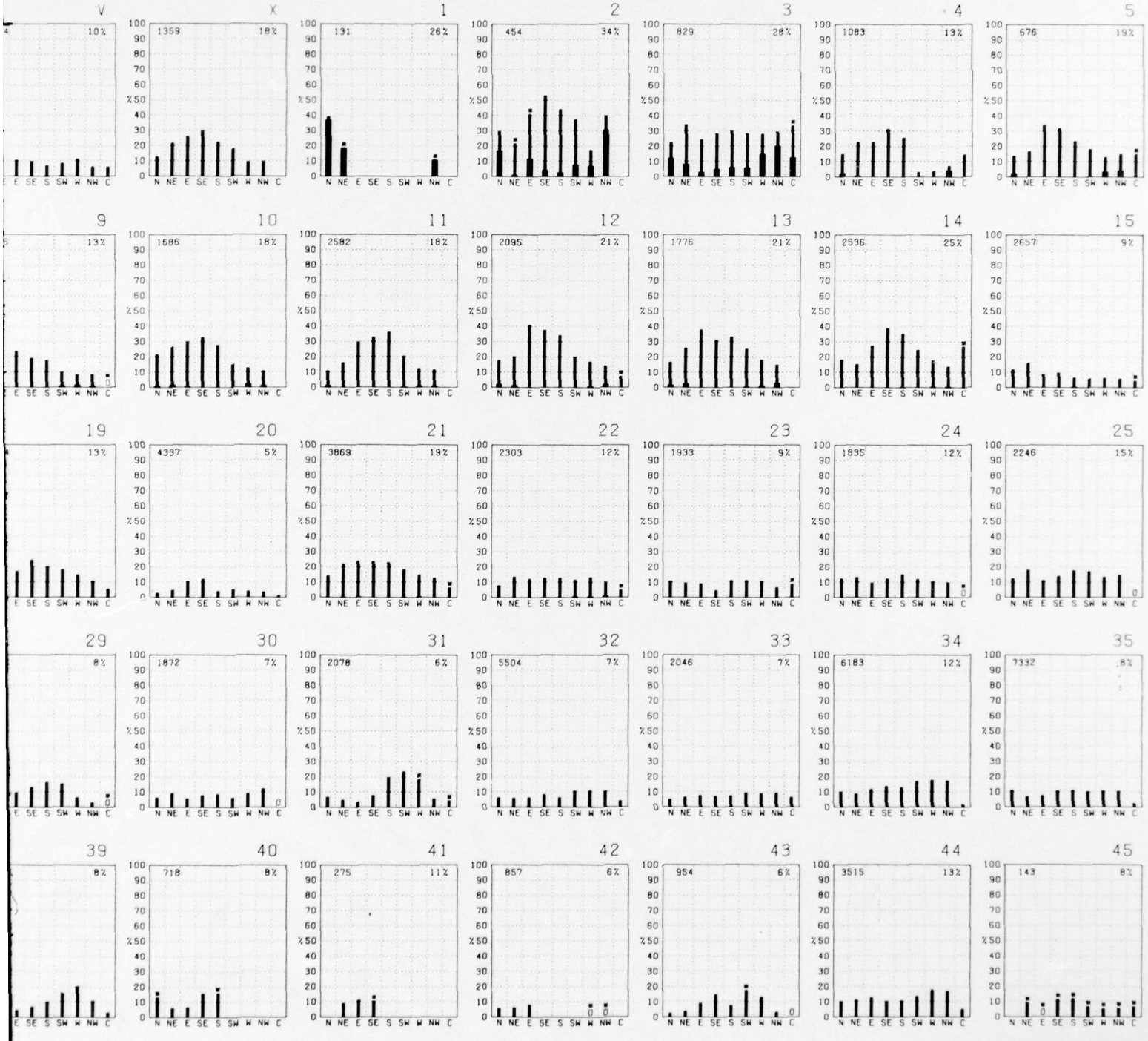


PRECIPITATION



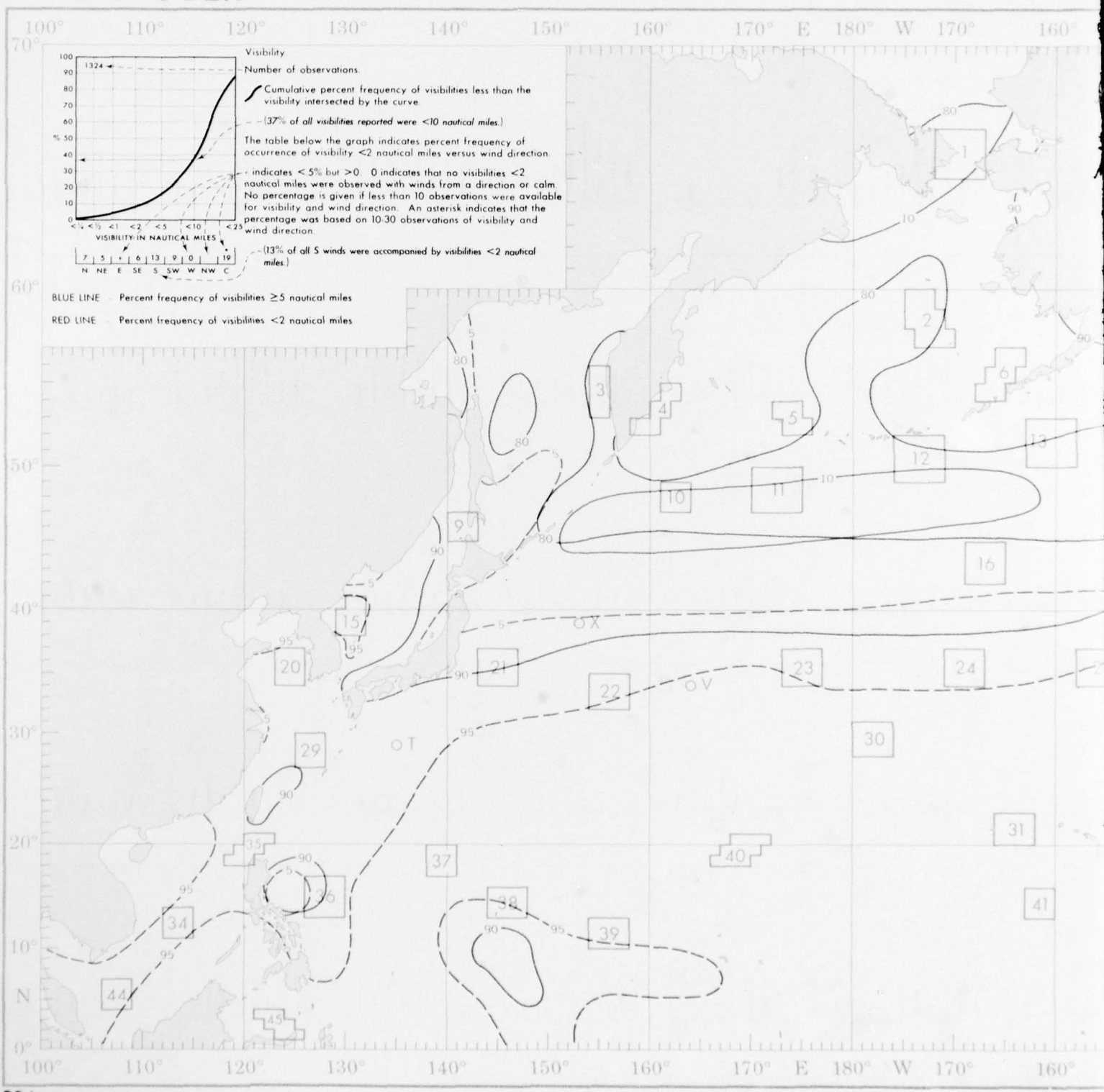
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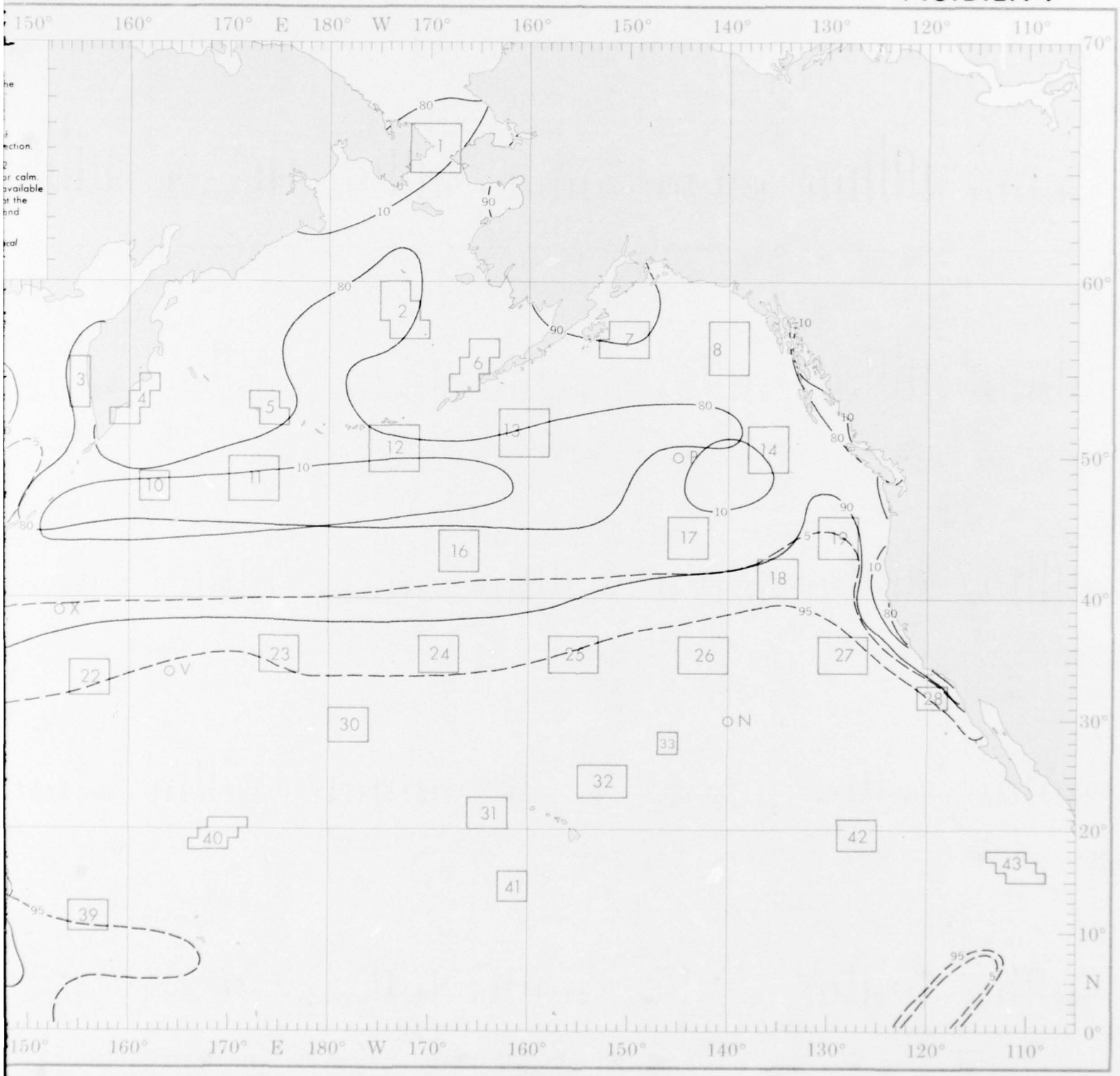


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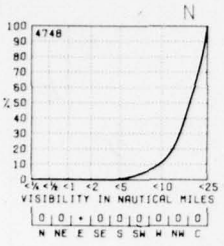
OCTOBER

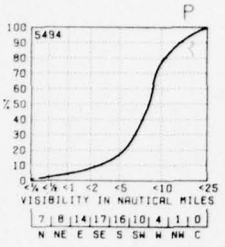

100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
1324
Visibility.
Number of observations.
Cumulative percent frequency of visibilities less than the visibility intersected by the curve.
(37% of all visibilities reported were <10 nautical miles.)
The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.
- indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.
VISIBILITY IN NAUTICAL MILES
<½ <1 <2 <5 <10 <25
7 5 + 6 13 9 0 19
N NE E SE S SW W NW C
(13% of all S winds were accompanied by visibilities <2 nautical miles.)
BLUE LINE - Percent frequency of visibilities ≥5 nautical miles
RED LINE - Percent frequency of visibilities <2 nautical miles
OX
OV
OT

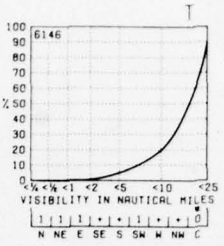
VISIBILITY

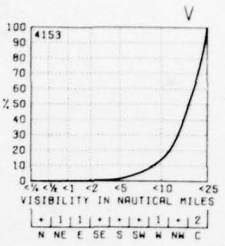

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
80 10 90 95
1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
OX OV ON OP

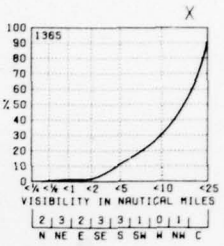
VISIBILITY

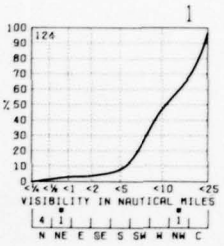


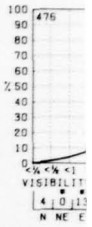


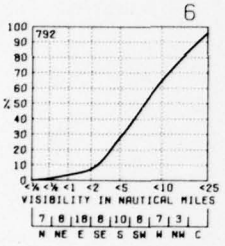


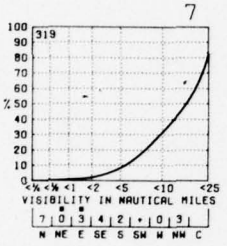


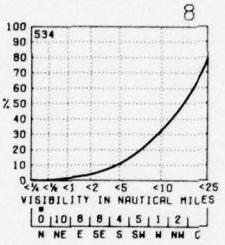


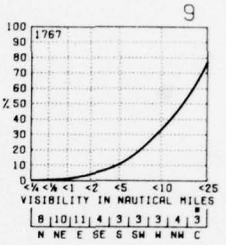


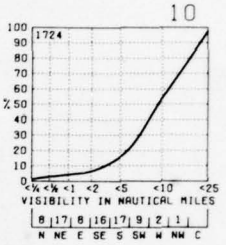


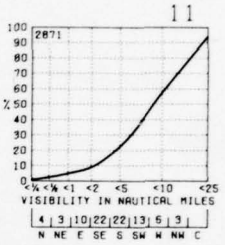


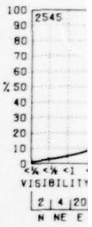


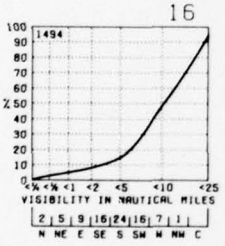


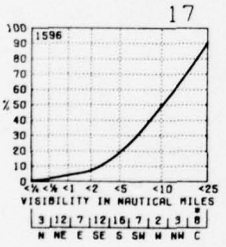


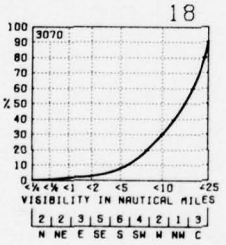


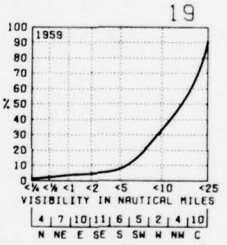


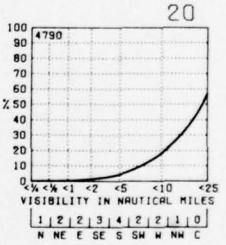


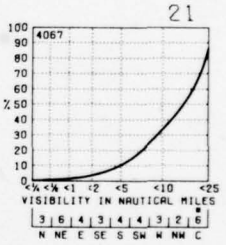


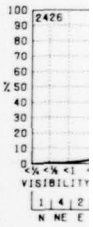


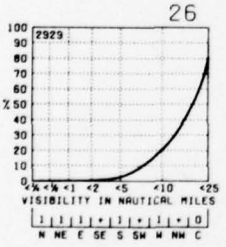


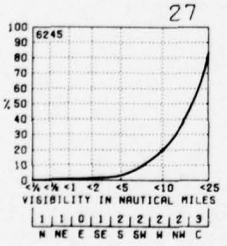


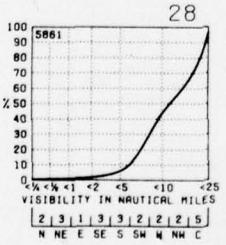


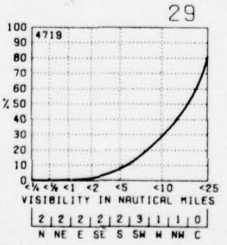


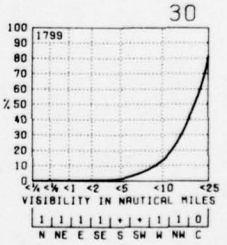


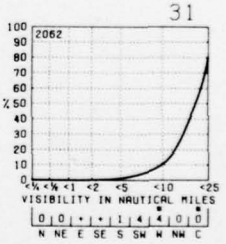


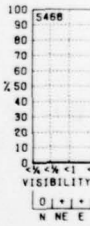


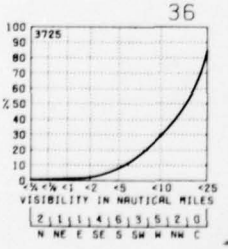


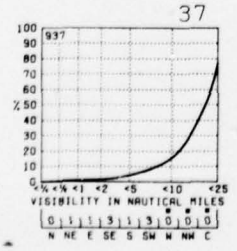


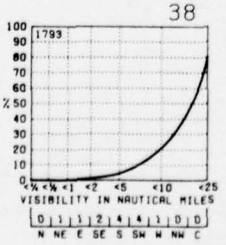


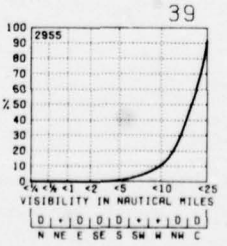


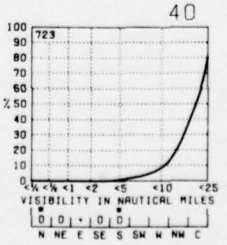


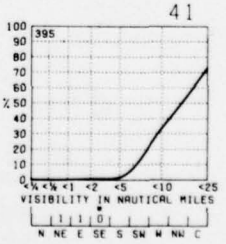


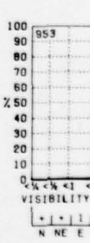






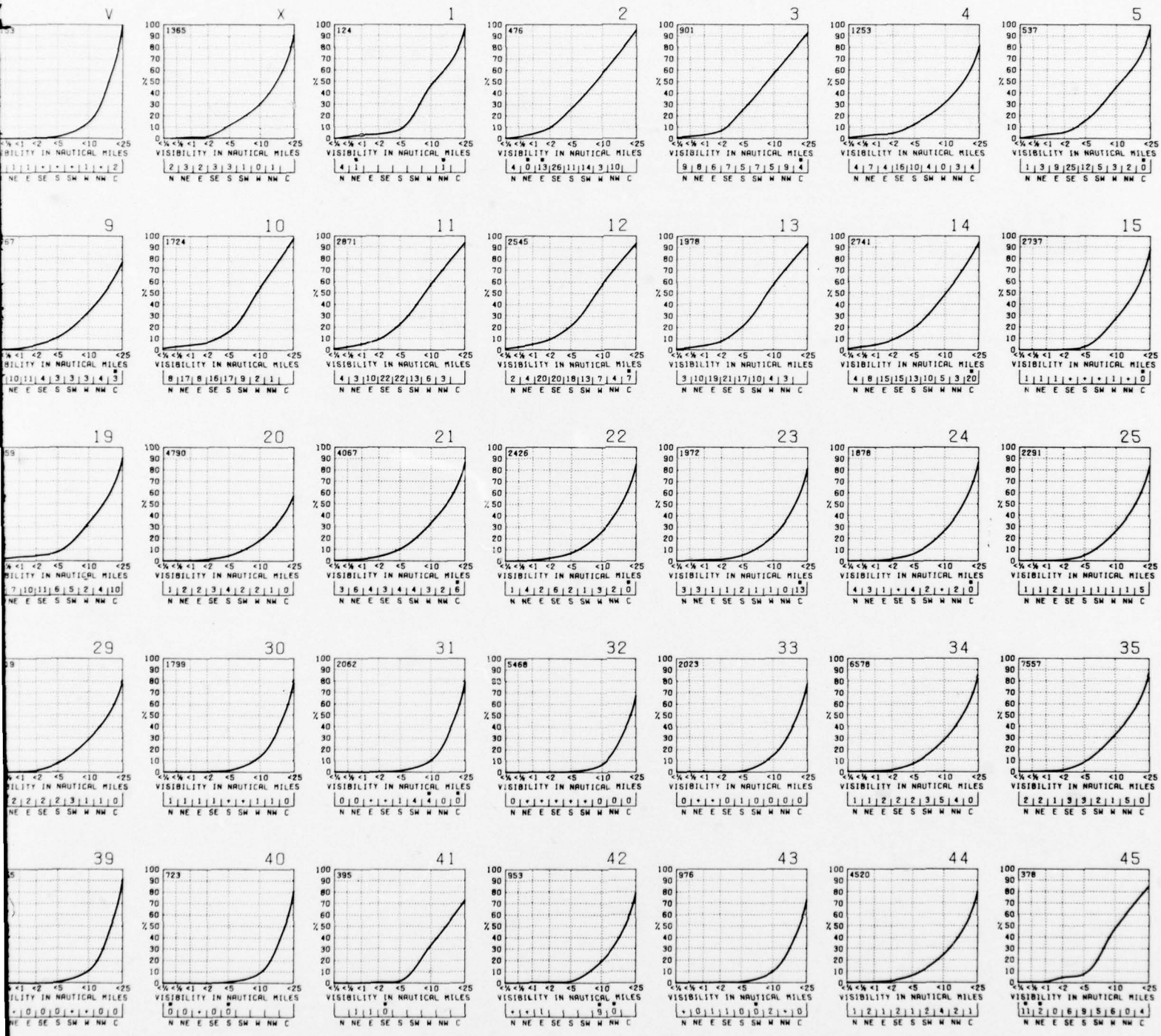






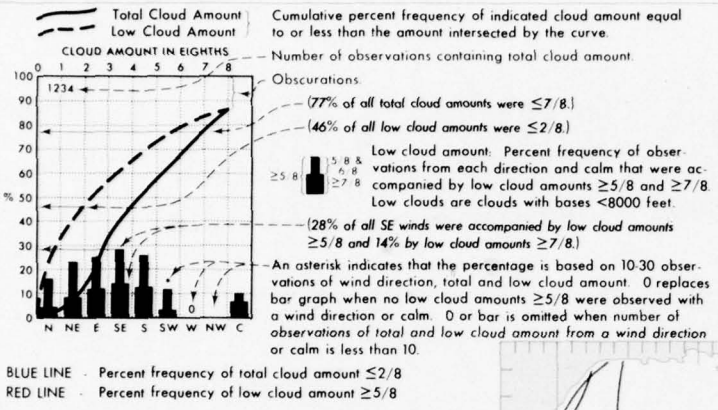
Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted v

OCTOBER



ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

Low cloud amount: Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

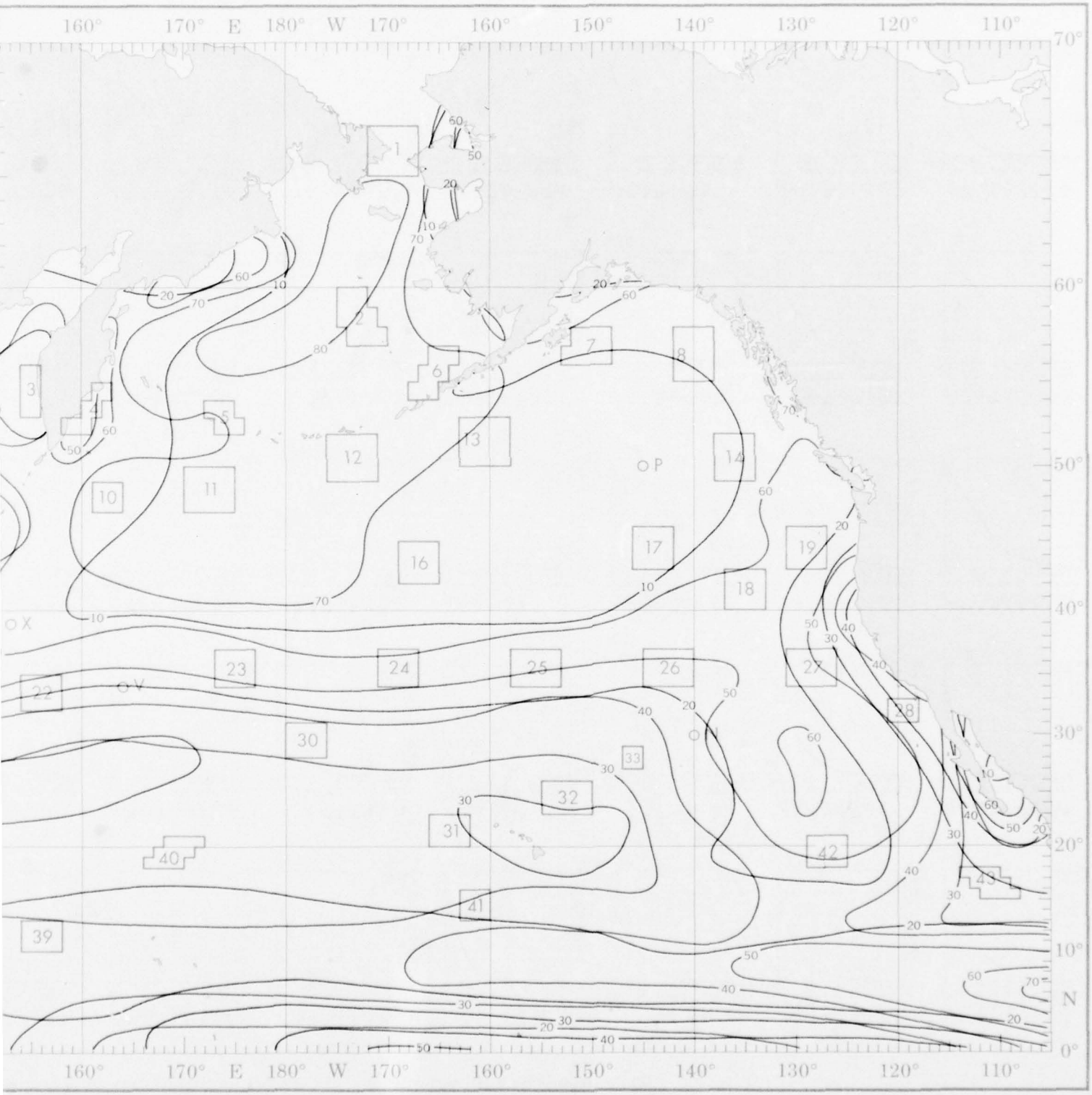
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

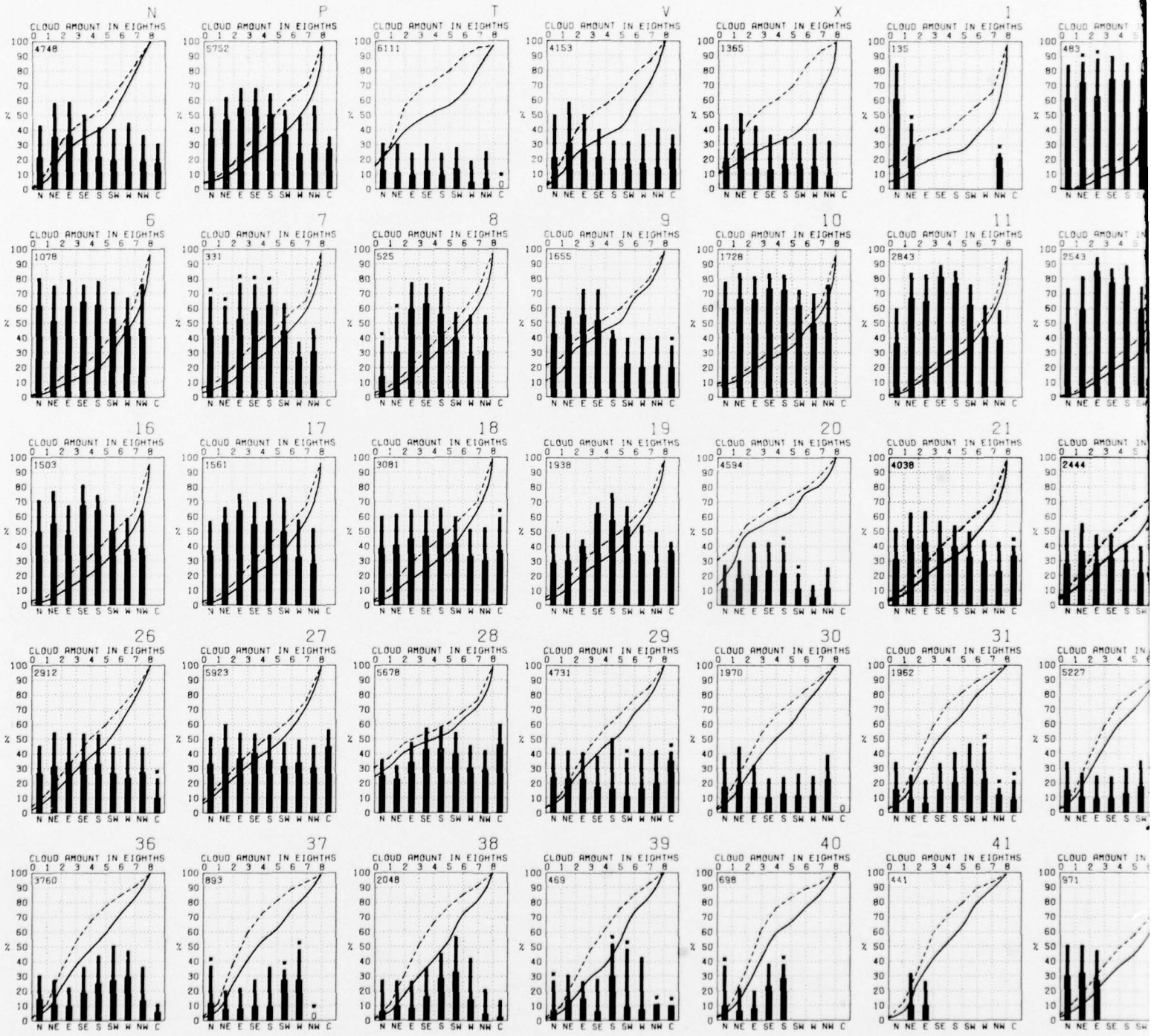
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

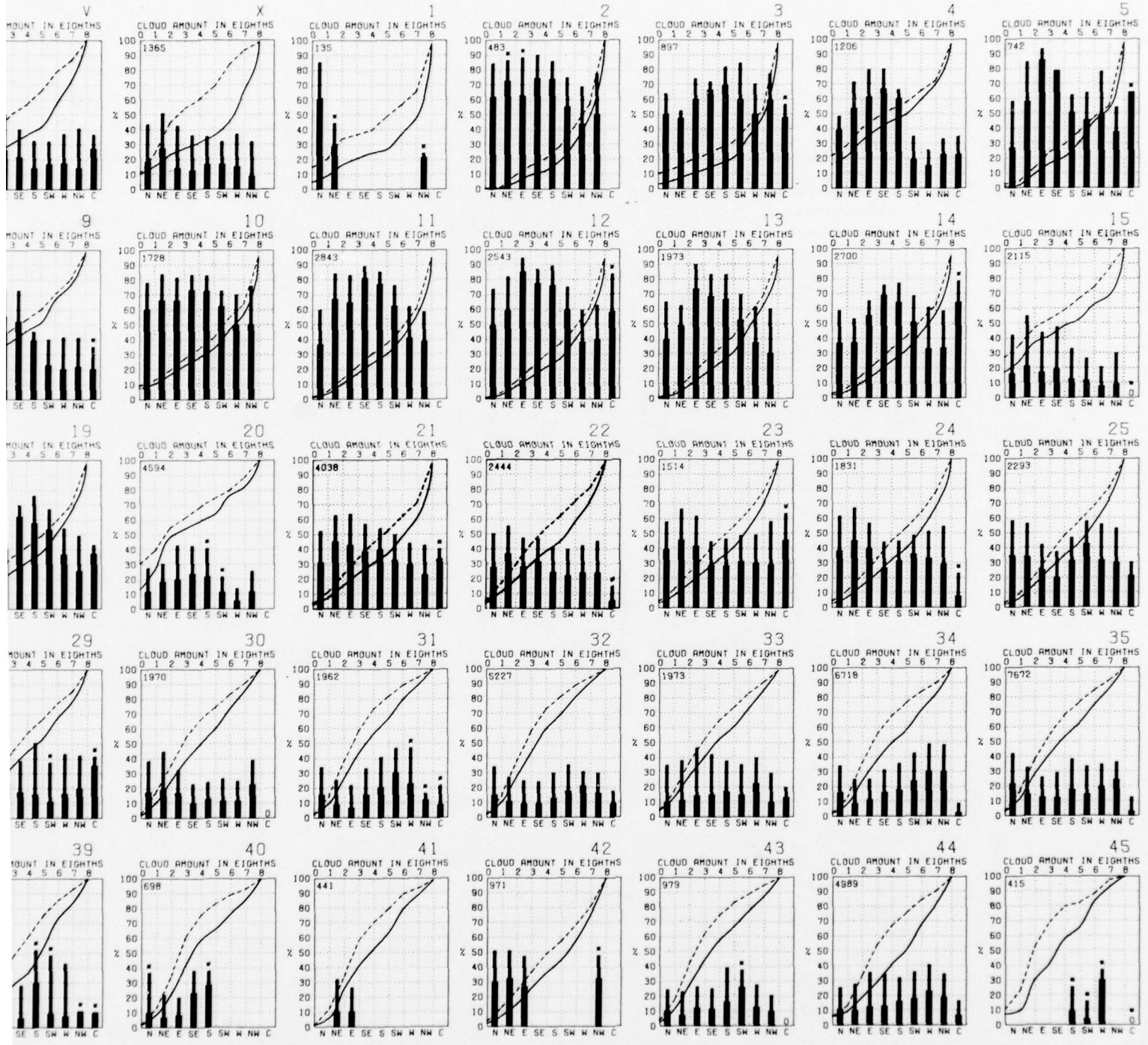

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
O P O X O V O Q
10 20 30 40 50 60 70 80

CLOUD COVER



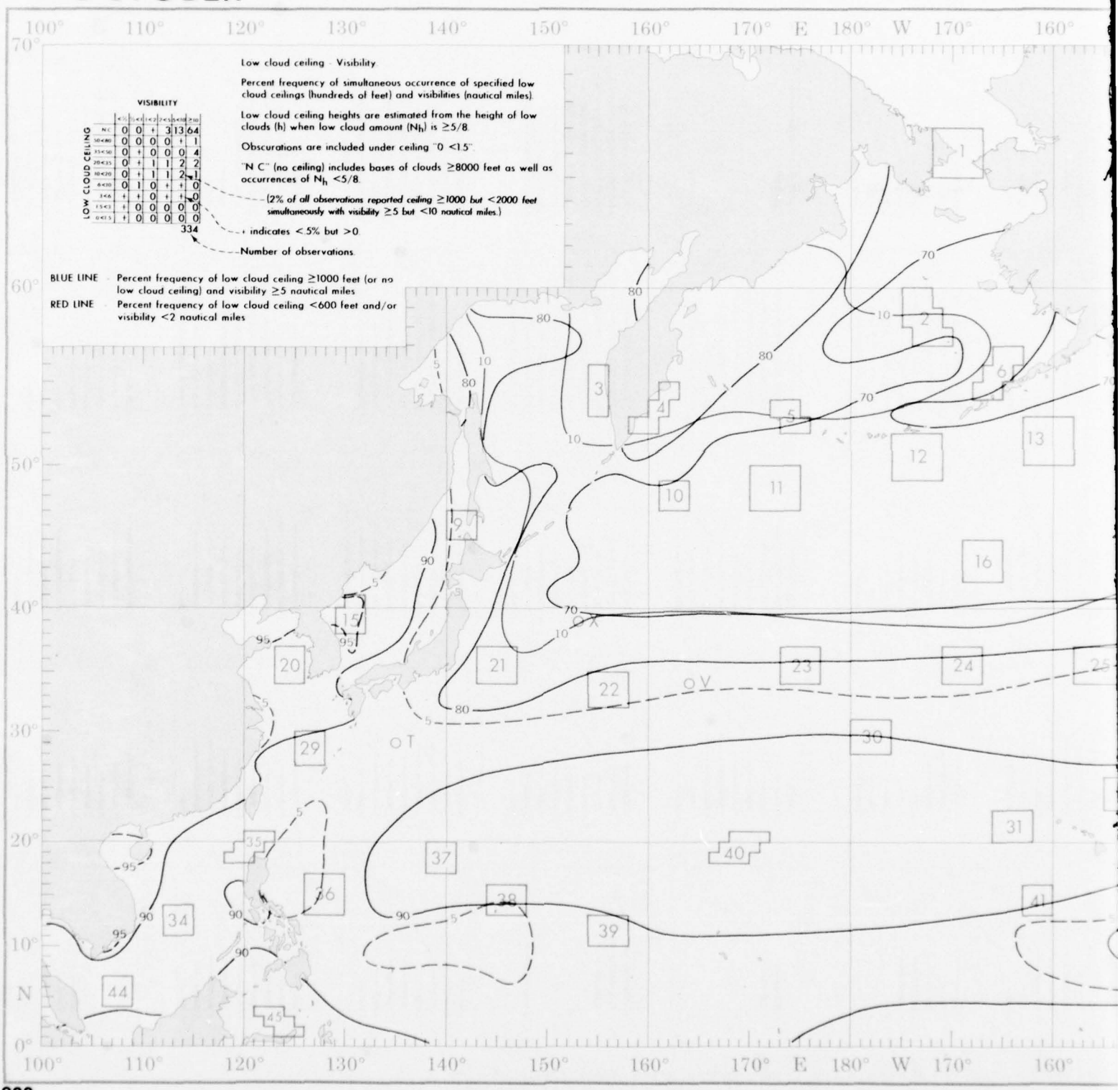
Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

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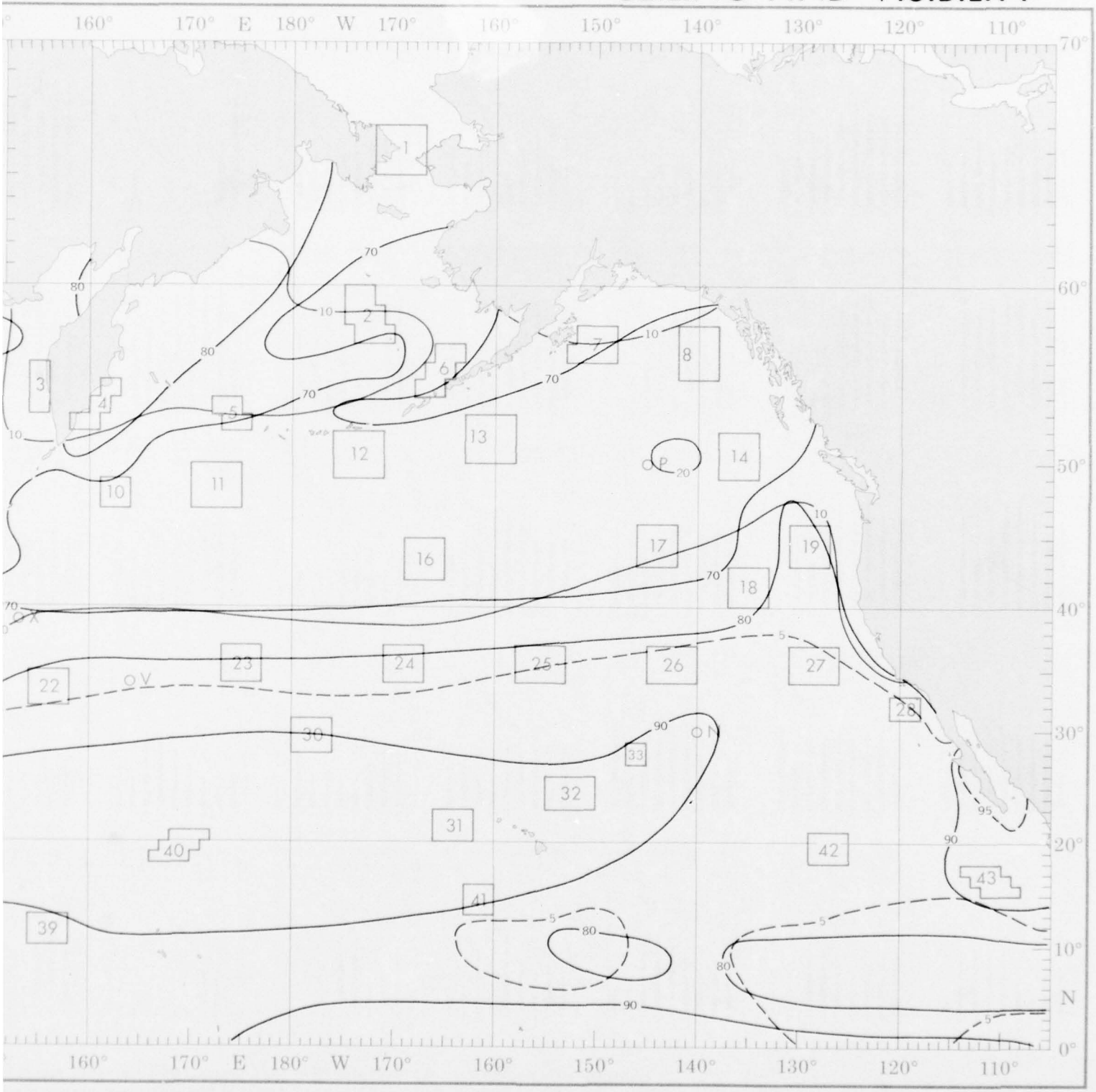


...e objective compilation of available data for specified areas without regard to suspected biases.
...es (opposite page) are based on all available data subjectively adjusted where bias was evident.

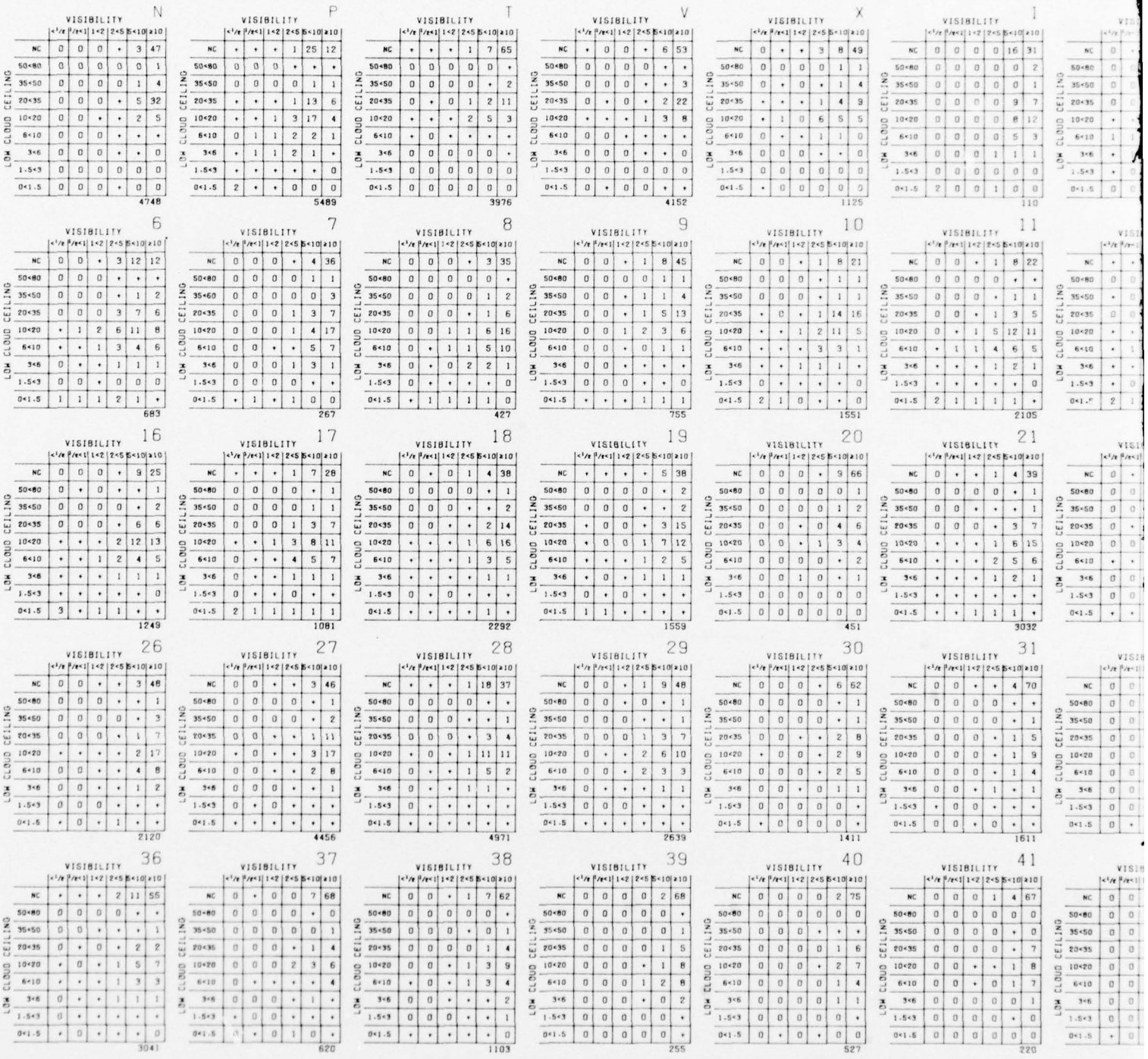
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Low cloud ceiling - Visibility
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
N C 0 0 + 3 13 64
≥8 0 0 0 0 + 1
5≤<8 0 + 0 0 0 4
2≤<5 0 + 1 1 2 2
1≤<2 0 + 1 1 2 1
.6≤<1 0 1 0 + + 0
.3≤.6 + + 0 + + 0
.1≤<.3 + 0 0 0 0 0
0≤<.1 + 0 0 0 0 0
334
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0
Number of observations
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

CEILING AND VISIBILITY

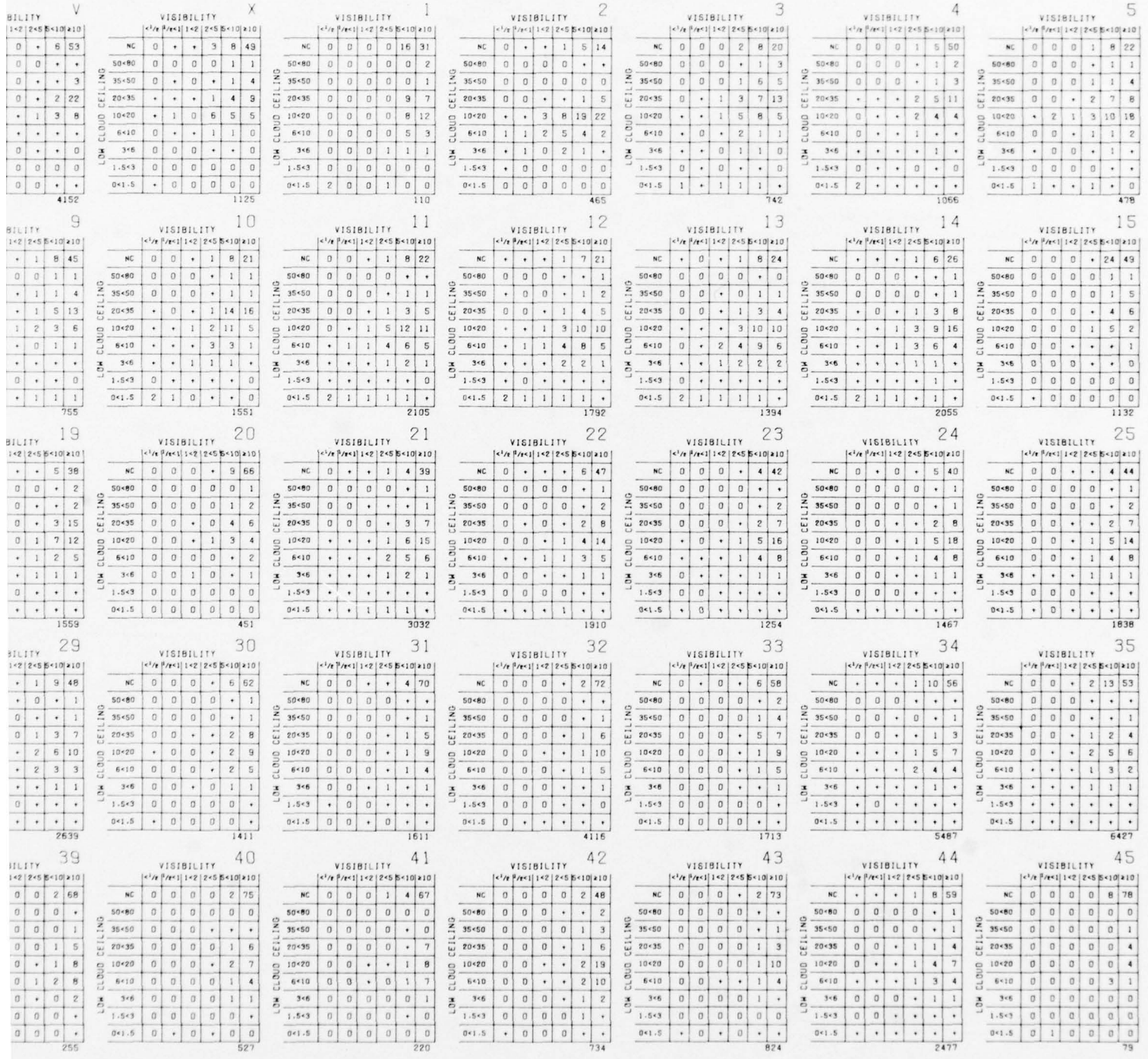


CEILING AND VISIBILITY



Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

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LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	+	3	8	49
50≤80	0	0	0	0	1	1
35≤50	0	+	0	+	1	4
20≤35	+	+	+	1	4	9
10≤20	+	1	0	6	5	5
6≤10	0	+	+	1	1	0
3≤6	0	0	0	+	+	0
1.5≤3	0	0	0	0	0	0
0≤1.5	+	0	0	0	0	0

V — 4152

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	0	16	31
50≤80	0	0	0	0	0	2
35≤50	0	0	0	0	0	1
20≤35	0	0	0	0	9	7
10≤20	0	0	0	0	8	12
6≤10	0	0	0	0	5	3
3≤6	0	0	0	1	1	1
1.5≤3	0	0	0	0	0	0
0≤1.5	2	0	0	1	0	0

1 — 110

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	+	1	5	14
50≤80	0	0	0	0	+	+
35≤50	0	0	0	0	0	0
20≤35	0	0	+	+	1	5
10≤20	+	+	3	8	19	22
6≤10	1	1	2	5	4	2
3≤6	+	1	0	2	1	+
1.5≤3	+	0	0	0	0	0
0≤1.5	0	0	0	0	0	0

2 — 465

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	2	8	20
50≤80	0	0	0	+	1	3
35≤50	0	0	0	1	6	5
20≤35	0	+	1	3	7	13
10≤20	+	+	1	5	8	5
6≤10	+	0	+	2	1	1
3≤6	+	+	0	1	1	0
1.5≤3	0	+	0	+	+	0
0≤1.5	1	+	1	1	1	+

3 — 742

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	1	5	50
50≤80	0	0	0	+	1	2
35≤50	0	0	0	+	1	3
20≤35	+	+	+	2	5	11
10≤20	0	+	+	2	4	4
6≤10	0	+	+	1	+	+
3≤6	+	+	+	+	1	+
1.5≤3	0	+	+	0	+	0
0≤1.5	2	+	+	+	+	+

4 — 1066

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	1	8	22
50≤80	0	0	0	+	1	1
35≤50	0	0	0	1	1	4
20≤35	0	0	+	2	7	8
10≤20	+	2	1	3	10	18
6≤10	0	0	+	1	1	2
3≤6	+	0	0	+	1	+
1.5≤3	0	0	0	0	+	+
0≤1.5	1	+	+	1	+	0

5 — 478

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	1	8	45		
50≤80	0	0	1	1		
35≤50	+	1	1	4		
20≤35	+	1	5	13		
10≤20	1	2	3	6		
6≤10	+	0	1	1		
3≤6	+	+	+	+		
1.5≤3	0	+	+	+		
0≤1.5	+	1	1	+		

9 — 755

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	+	1	8	21
50≤80	0	0	0	+	1	1
35≤50	0	0	0	+	1	1
20≤35	+	0	+	1	14	16
10≤20	+	+	1	2	11	5
6≤10	+	+	+	3	3	1
3≤6	+	+	1	1	1	+
1.5≤3	0	+	+	+	+	0
0≤1.5	2	1	0	+	+	0

10 — 1551

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	+	1	8	22
50≤80	0	0	0	0	+	+
35≤50	0	0	0	+	1	1
20≤35	0	0	+	1	3	5
10≤20	0	+	1	5	12	11
6≤10	+	1	1	4	6	5
3≤6	+	+	+	1	2	1
1.5≤3	+	+	+	+	+	0
0≤1.5	2	1	1	1	1	+

11 — 2105

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	+	+	1	7	21
50≤80	0	0	0	+	+	1
35≤50	+	0	0	+	1	2
20≤35	0	0	+	1	4	5
10≤20	+	+	1	3	10	10
6≤10	+	1	1	4	8	5
3≤6	+	+	+	2	2	1
1.5≤3	+	0	+	+	+	+
0≤1.5	2	1	1	1	1	+

12 — 1792

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	0	+	1	8	24
50≤80	0	0	0	0	+	0
35≤50	0	0	+	0	1	1
20≤35	0	0	+	1	3	4
10≤20	+	+	+	3	10	10
6≤10	0	+	2	4	9	6
3≤6	+	+	1	2	2	2
1.5≤3	0	+	+	+	+	+
0≤1.5	2	1	1	1	1	+

13 — 1394

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	+	+	1	6	26
50≤80	0	0	0	+	+	1
35≤50	0	0	0	0	+	1
20≤35	0	0	+	1	3	8
10≤20	+	+	1	3	9	16
6≤10	0	+	1	3	6	4
3≤6	+	+	+	1	1	+
1.5≤3	+	+	+	+	1	+
0≤1.5	2	1	1	+	1	+

14 — 2055

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	24	49
50≤80	0	0	0	0	1	1
35≤50	0	0	0	0	1	5
20≤35	0	0	0	+	4	6
10≤20	0	0	0	1	5	2
6≤10	0	0	+	+	+	1
3≤6	0	0	0	+	+	0
1.5≤3	0	0	0	0	0	0
0≤1.5	+	0	0	0	0	0

15 — 1132

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	+	+	5	38	
50≤80	0	0	+	2		
35≤50	0	+	+	2		
20≤35	0	+	3	15		
10≤20	0	1	7	12		
6≤10	+	1	2	5		
3≤6	+	1	1	1		
1.5≤3	0	+	+	+		
0≤1.5	+	+	+	+		

19 — 1559

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	9	66
50≤80	0	0	0	0	0	1
35≤50	0	0	0	0	1	2
20≤35	0	0	+	0	4	6
10≤20	0	0	0	1	3	4
6≤10	0	0	0	0	+	2
3≤6	0	0	1	0	+	1
1.5≤3	0	0	0	0	0	0
0≤1.5	0	0	0	0	0	0

20 — 451

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	+	1	4	39
50≤80	0	0	0	0	+	1
35≤50	0	0	+	+	+	1
20≤35	0	0	0	+	3	7
10≤20	+	+	+	1	6	15
6≤10	+	+	+	2	5	6
3≤6	+	+	+	1	2	1
1.5≤3	+	+	+	+	+	+
0≤1.5	+	+	1	1	1	+

21 — 3032

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	+	+	6	47
50≤80	0	0	0	0	+	1
35≤50	0	0	0	0	+	2
20≤35	0	0	0	+	2	8
10≤20	0	0	+	1	4	14
6≤10	+	+	+	1	3	5
3≤6	0	0	+	+	1	1
1.5≤3	0	0	0	0	+	+
0≤1.5	+	+	+	1	+	+

22 — 1910

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	4	42
50≤80	0	0	0	0	+	+
35≤50	0	0	0	0	+	2
20≤35	0	+	0	+	2	7
10≤20	0	0	+	1	5	16
6≤10	+	+	+	1	4	8
3≤6	0	+	+	+	1	1
1.5≤3	0	0	+	+	+	+
0≤1.5	+	0	+	+	+	+

23 — 1254

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	5	40
50≤80	0	0	0	0	+	1
35≤50	0	0	0	0	+	1
20≤35	0	0	+	+	2	8
10≤20	0	0	+	1	5	18
6≤10	0	0	+	1	4	8
3≤6	0	0	+	+	1	1
1.5≤3	0	0	0	+	+	+
0≤1.5	+	+	+	+	+	+

24 — 1467

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	0	+	4	44
50≤80	0	0	0	0	+	1
35≤50	0	0	0	0	+	2
20≤35	0	0	+	+	2	7
10≤20	0	0	+	1	5	14
6≤10	0	0	+	1	4	8
3≤6	+	+	+	1	1	1
1.5≤3	+	0	+	+	+	+
0≤1.5	+	0	+	+	+	+

25 — 1838

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	1	9	48		
50≤80	+	0	+	1		
35≤50	0	+	+	1		
20≤35	0	1	3	7		
10≤20	+	2	6	10		
6≤10	+	2	3	3		
3≤6	+	+	1	1		
1.5≤3	0	+	+	+		
0≤1.5	+	+	+	+		

29 — 2639

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	6	62
50≤80	0	0	0	0	+	1
35≤50	0	0	0	0	+	1
20≤35	0	0	0	+	2	8
10≤20	+	0	0	+	2	9
6≤10	0	0	0	+	2	5
3≤6	0	0	+	0	1	1
1.5≤3	0	0	0	0	0	+
0≤1.5	+	0	0	0	0	+

30 — 1411

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	+	+	4	70
50≤80	0	0	0	0	+	+
35≤50	0	0	0	0	+	1
20≤35	0	0	0	+	1	5
10≤20	0	0	0	+	1	9
6≤10	0	0	0	+	1	4
3≤6	0	0	+	1	+	1
1.5≤3	+	0	0	+	+	+
0≤1.5	0	0	+	0	+	+

31 — 1611

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	+	+	2	72
50≤80	0	0	0	0	+	+
35≤50	0	0	0	0	+	1
20≤35	0	0	0	+	1	6
10≤20	0	0	+	+	1	10
6≤10	0	0	0	+	1	5
3≤6	0	0	0	+	+	1
1.5≤3	0	0	0	+	+	0
0≤1.5	0	+	+	+	+	+

32 — 4116

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	+	0	+	6	58
50≤80	0	0	0	0	+	2
35≤50	0	0	0	0	1	4
20≤35	0	0	0	+	5	7
10≤20	0	0	0	+	1	9
6≤10	0	0	0	+	1	5
3≤6	0	0	0	+	+	1
1.5≤3	0	0	0	0	0	+
0≤1.5	0	0	0	0	+	+

33 — 1713

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	+	+	1	10	56
50≤80	0	0	0	+	+	+
35≤50	0	0	+	0	+	1
20≤35	0	0	+	+	1	3
10≤20	0	+	+	1	5	7
6≤10	+	+	+	2	4	4
3≤6	+	+	+	+	1	+
1.5≤3	+	0	+	+	+	+
0≤1.5	+	+	+	+	+	+

34 — 5487

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	+	2	13	53
50≤80	0	0	0	+	+	+
35≤50	0	0	0	+	+	1
20≤35	0	0	+	1	2	4
10≤20	0	+	+	2	5	6
6≤10	+	+	+	1	3	2
3≤6	+	+	+	1	1	1
1.5≤3	+	+	+	+	+	+
0≤1.5	+	+	+	+	+	+

35 — 6427

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	2	68	
50≤80	0	0	0	+		
35≤50	0	0	0	1		
20≤35	0	0	1	5		
10≤20	0	+	2	8		
6≤10	0	1	2	8		
3≤6	0	+	0	2		
1.5≤3	0	0	0	+		
0≤1.5	0	0	+	+		

39 — 255

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	0	2	75
50≤80	0	0	0	0	0	0
35≤50	0	0	0	+	+	+
20≤35	0	0	0	0	1	6
10≤20	0	0	0	0	+	7
6≤10	0	0	0	0	1	4
3≤6	0	0	0	0	1	1
1.5≤3	0	0	0	0	0	+
0≤1.5	0	+	0	+	0	0

40 — 527

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	1	4	67
50≤80	0	0	0	0	0	0
35≤50	0	0	0	0	+	0
20≤35	0	0	0	0	+	7
10≤20	0	0	+	+	1	8
6≤10	0	0	+	0	1	7
3≤6	0	0	0	0	0	1
1.5≤3	0	0	0	0	+	0
0≤1.5	0	0	0	0	0	0

41 — 220

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	0	2	48
50≤80	0	0	0	+	+	2
35≤50	0	0	0	0	1	3
20≤35	0	0	0	+	1	6
10≤20	0	0	+	+	2	19
6≤10	0	0	+	+	2	10
3≤6	0	0	0	0	+	2
1.5≤3	0	0	0	0	1	+
0≤1.5	+	0	0	0	+	+

42 — 734

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	+	2	73
50≤80	0	0	0	0	+	+
35≤50	0	0	0	0	+	1
20≤35	0	0	0	0	1	3
10≤20	0	0	0	0	1	10
6≤10	0	0	+	+	1	4
3≤6	0	0	0	0	1	+
1.5≤3	0	0	0	0	0	0
0≤1.5	+	0	+	0	+	+

43 — 824

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	+	+	+	1	8	59
50≤80	0	0	0	0	+	1
35≤50	0	0	0	0	+	1
20≤35	0	0	+	1	1	4
10≤20	0	+	+	1	4	7
6≤10	+	+	+	1	3	4
3≤6	0	0	0	+	1	1
1.5≤3	0	0	+	+	+	+
0≤1.5	+	+	+	+	+	+

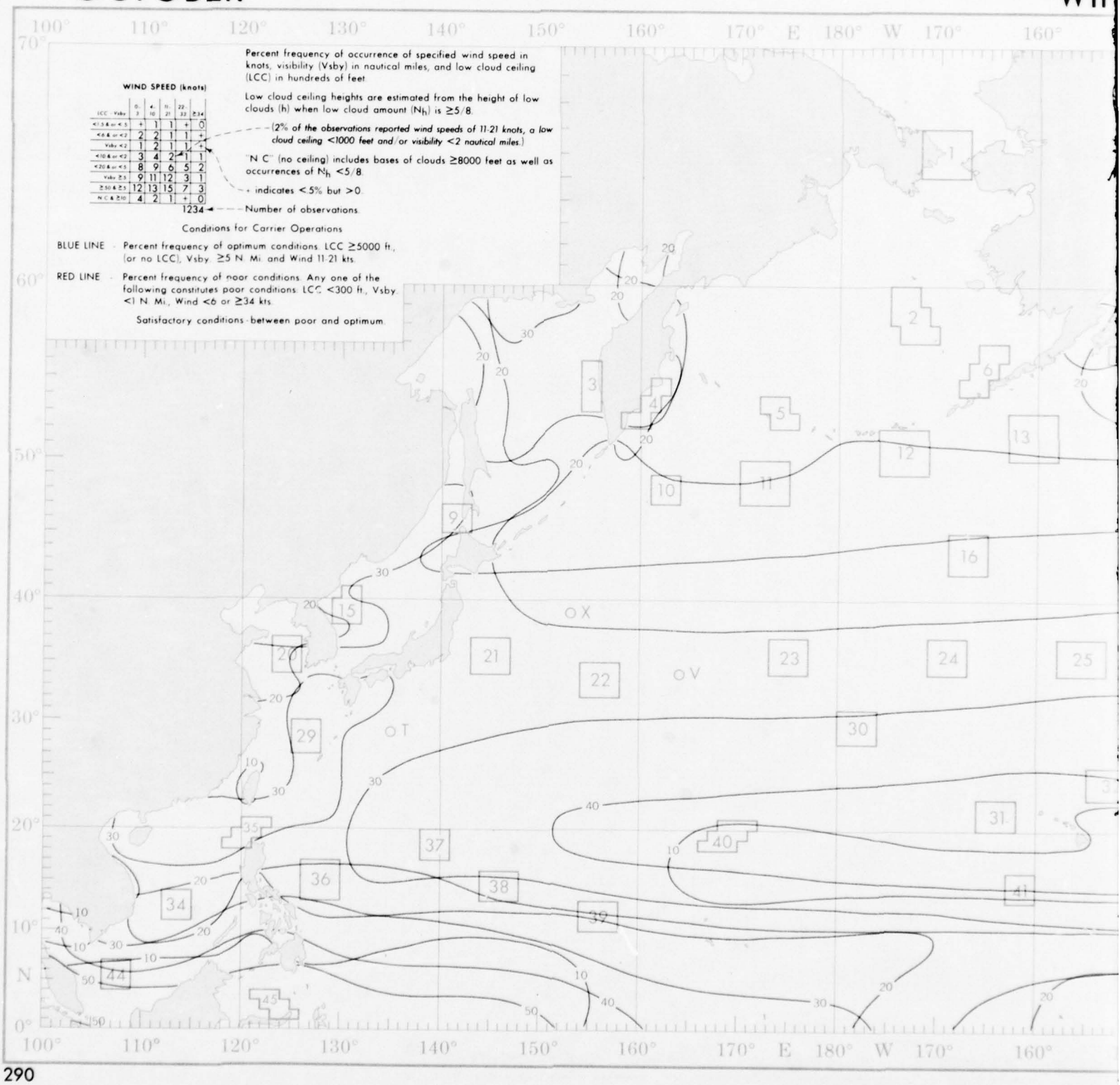
44 — 2477

LOW CLOUD CEILING	VISIBILITY <1/2	1/2≤1	1≤2	2≤5	5≤10	≥10
NC	0	0	0	0	8	78
50≤80	0	0	0	0	0	0
35≤50	0	0	0	0	0	1
20≤35	0	0	0	0	0	4
10≤20	0	0	0	0	0	4
6≤10	0	0	0	0	3	1
3≤6	0	0	0	0	0	0
1.5≤3	0	0	0	0	0	0
0≤1.5	0	1	0	0	0	0

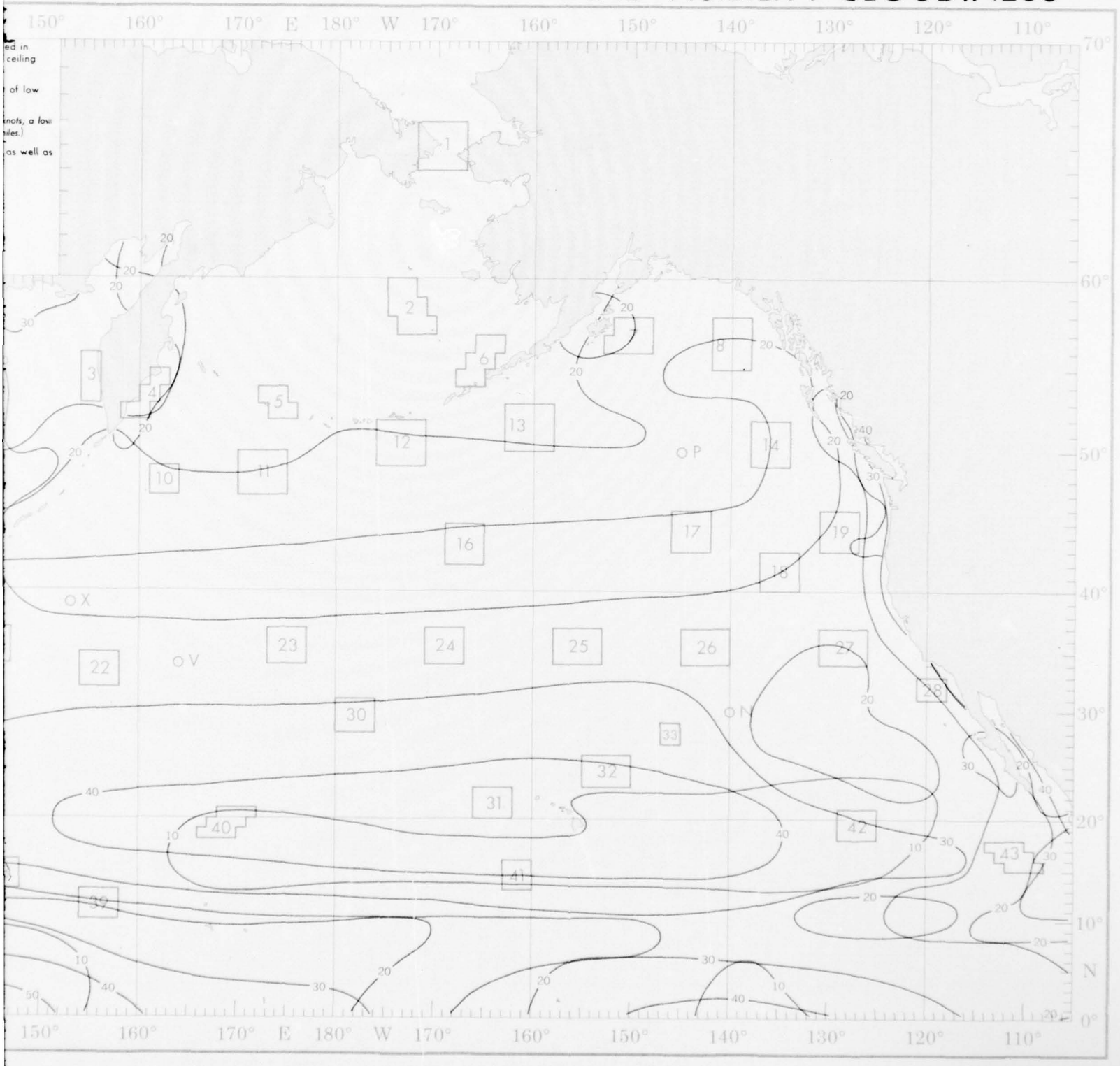
45 — 79

objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER


WIND SPEED (knots)
LCC - Vsby
0-3
4-10
11-21
22-33
≥34
<1 3/4 or <5
<6 & or <2
Vsby <2
<10 & or <2
<20 & or <5
Vsby ≥5
≥20 & ≥5
N C & ≥10
1 2 3 4 3 2 1 + 1 2 1 + 1 2 1 + 3 4 2 1 1 8 9 6 5 2 9 11 12 3 1 12 13 15 7 3 4 2 1 + 0
1234
Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (Nh) is ≥5/8.
(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of Nh <5/8.
+ indicates <.5% but >0.
Number of observations.
Conditions for Carrier Operations
BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.
RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.
Satisfactory conditions - between poor and optimum.
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	0	0	+	0
<10 & OR <2	0	+	+	+	0
<20 & OR <5	1	3	3	1	+
VSBY ≥5	9	41	45	5	+
≥50 & ≥5	6	23	20	2	+
NC & ≥10	5	21	19	2	+

4741

P

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	4	2
VSBY <2	+	1	2	3	2
<10 & OR <2	+	1	5	6	3
<20 & OR <5	1	3	13	17	8
VSBY ≥5	2	10	29	32	11
≥50 & ≥5	1	5	14	14	4
NC & ≥10	1	2	4	3	1

5477

T

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	1	5	5	1
VSBY ≥5	3	22	54	16	1
≥50 & ≥5	3	18	41	10	+
NC & ≥10	2	17	38	8	+

3970

V

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	1	+	+
<20 & OR <5	+	2	6	4	+
VSBY ≥5	4	26	50	17	1
≥50 & ≥5	3	18	31	7	+
NC & ≥10	3	17	27	6	+

4143

X

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	0	+	+	1	1
VSBY <2	0	+	+	1	1
<10 & OR <2	0	+	1	1	1
<20 & OR <5	+	2	8	9	4
VSBY ≥5	3	15	45	21	3
≥50 & ≥5	2	12	31	12	1
NC & ≥10	2	10	27	9	+

1124

1

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	1	1	0
<6 & OR <2	0	0	2	3	0
VSBY <2	0	0	1	1	0
<10 & OR <2	0	0	7	6	0
<20 & OR <5	1	7	18	8	0
VSBY ≥5	3	32	54	8	0
≥50 & ≥5	2	18	28	2	0
NC & ≥10	1	7	21	2	0

107

WIND S

LCC – VSBY	0–3
<1.5 & OR <.5	
<6 & OR <2	
VSBY <2	
<10 & OR <2	
<20 & OR <5	
VSBY ≥5	
≥50 & ≥5	
NC & ≥10	

6

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	2	3	1
<6 & OR <2	0	2	4	6	3
VSBY <2	0	1	3	2	2
<10 & OR <2	+	3	9	10	6
<20 & OR <5	1	8	22	22	7
VSBY ≥5	2	13	31	23	3
≥50 & ≥5	1	4	11	8	+
NC & ≥10	+	3	5	3	0

671

7

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	+	2	2	1	3
VSBY <2	0	1	0	+	1
<10 & OR <2	+	4	6	6	4
<20 & OR <5	3	9	16	11	5
VSBY ≥5	5	23	39	20	7
≥50 & ≥5	1	11	22	6	2
NC & ≥10	1	10	18	6	2

266

8

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	2	1	+
<6 & OR <2	+	1	5	4	3
VSBY <2	0	+	1	2	1
<10 & OR <2	+	3	11	8	6
<20 & OR <5	1	6	20	15	10
VSBY ≥5	3	15	42	21	10
≥50 & ≥5	2	8	20	7	2
NC & ≥10	2	8	19	6	1

426

9

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	1	1	1
<6 & OR <2	0	1	2	1	1
VSBY <2	0	0	1	+	1
<10 & OR <2	0	1	4	1	1
<20 & OR <5	+	5	10	5	2
VSBY ≥5	5	23	47	15	2
≥50 & ≥5	3	14	28	6	1
NC & ≥10	3	12	24	5	+

542

10

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	1	1	1
<6 & OR <2	+	1	3	4	2
VSBY <2	+	1	1	2	2
<10 & OR <2	+	1	6	7	2
<20 & OR <5	+	4	14	13	6
VSBY ≥5	1	12	39	25	8
≥50 & ≥5	+	5	16	7	2
NC & ≥10	+	4	11	5	1

1545

11

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	2	2	1
<6 & OR <2	+	2	5	4	2
VSBY <2	+	1	3	2	2
<10 & OR <2	+	5	10	9	4
<20 & OR <5	1	12	23	17	5
VSBY ≥5	1	21	34	18	4
≥50 & ≥5	1	8	14	6	1
NC & ≥10	+	7	11	4	1

2088

WIND SP

LCC – VSBY	0–3
<1.5 & OR <.5	
<6 & OR <2	
VSBY <2	
<10 & OR <2	
<20 & OR <5	
VSBY ≥5	
≥50 & ≥5	
NC & ≥10	

16

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	3	2	+
<6 & OR <2	+	2	5	4	2
VSBY <2	0	1	3	2	1
<10 & OR <2	+	2	9	8	3
<20 & OR <5	+	8	21	15	6
VSBY ≥5	1	16	40	24	6
≥50 & ≥5	1	6	16	9	2
NC & ≥10	+	4	12	7	1

1246

17

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	5	3	1
VSBY <2	0	1	2	2	1
<10 & OR <2	+	4	12	8	3
<20 & OR <5	1	8	23	17	4
VSBY ≥5	1	15	38	24	5
≥50 & ≥5	1	7	16	10	2
NC & ≥10	1	6	14	6	1

1080

18

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	3	1	+
VSBY <2	0	+	1	+	+
<10 & OR <2	+	3	7	4	1
<20 & OR <5	1	10	18	9	2
VSBY ≥5	3	29	45	15	3
≥50 & ≥5	2	15	20	6	1
NC & ≥10	2	13	18	5	+

2280

19

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	1	1	+	+
<6 & OR <2	1	1	2	2	1
VSBY <2	1	1	1	1	+
<10 & OR <2	1	3	6	4	1
<20 & OR <5	1	7	16	8	2
VSBY ≥5	4	23	48	18	2
≥50 & ≥5	2	13	22	8	+
NC & ≥10	2	11	18	6	+

1555

20

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	+	1	0	0
<10 & OR <2	0	2	2	+	+
<20 & OR <5	1	2	6	2	1
VSBY ≥5	5	47	37	7	2
≥50 & ≥5	3	40	27	4	+
NC & ≥10	2	37	23	3	0

444

21

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	1	1
<6 & OR <2	+	1	3	3	2
VSBY <2	+	+	1	1	1
<10 & OR <2	+	2	9	7	3
<20 & OR <5	1	7	19	14	4
VSBY ≥5	2	21	44	21	3
≥50 & ≥5	1	13	22	8	1
NC & ≥10	1	12	19	6	1

3020

WIND SP

LCC – VSBY	0–3
<1.5 & OR <.5	
<6 & OR <2	
VSBY <2	
<10 & OR <2	
<20 & OR <5	
VSBY ≥5	
≥50 & ≥5	
NC & ≥10	

26

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	4	8	4	1
<20 & OR <5	1	11	18	6	1
VSBY ≥5	4	34	45	13	1
≥50 & ≥5	3	20	24	6	+
NC & ≥10	3	19	22	5	+

2113

27

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	2	+	+
VSBY <2	+	+	+	+	0
<10 & OR <2	1	5	6	2	+
<20 & OR <5	2	12	16	4	+
VSBY ≥5	6	35	43	13	1
≥50 & ≥5	3	18	21	7	+
NC & ≥10	3	17	20	6	+

4436

28

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	+	+	0
<6 & OR <2	1	2	1	+	0
VSBY <2	+	1	+	+	0
<10 & OR <2	2	6	4	+	0
<20 & OR <5	4	18	14	1	+
VSBY ≥5	8	42	39	5	+
≥50 & ≥5	4	23	24	4	+
NC & ≥10	3	14	16	3	+

4919

29

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	2	+
VSBY <2	0	+	+	1	+
<10 & OR <2	+	2	5	4	+
<20 & OR <5	+	5	15	9	1
VSBY ≥5	2	23	47	18	1
≥50 & ≥5	2	17	30	9	1
NC & ≥10	1	14	25	7	+

2626

30

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	5	1	+
<20 & OR <5	1	5	11	4	+
VSBY ≥5	5	34	47	11	1
≥50 & ≥5	4	26	30	7	+
NC & ≥10	4	24	28	6	+

1407

31

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	0	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	4	1	+
<20 & OR <5	+	5	9	3	+
VSBY ≥5	4	35	52	8	+
≥50 & ≥5	4	28	38	5	0
NC & ≥10	4	26	36	4	0

1601

WIND SP

LCC – VSBY	0–3
<1.5 & OR <.5	
<6 & OR <2	
VSBY <2	
<10 & OR <2	
<20 & OR <5	
VSBY ≥5	
≥50 & ≥5	
NC & ≥10	

36

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	+	1	2	1	1
VSBY <2	0	+	1	1	1
<10 & OR <2	+	3	7	3	1
<20 & OR <5	1	9	13	5	1
VSBY ≥5	5	45	35	5	1
≥50 & ≥5	4	35	24	2	+
NC & ≥10	4	30	19	2	+

3033

37

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	2	5	1	0
<20 & OR <5	+	4	11	3	+
VSBY ≥5	5	38	46	7	0
≥50 & ≥5	4	33	34	3	0
NC & ≥10	4	30	31	3	0

610

38

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	3	6	2	+
<20 & OR <5	1	7	12	5	1
VSBY ≥5	9	42	38	6	+
≥50 & ≥5	8	34	25	2	+
NC & ≥10	8	31	22	1	0

1094

39

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	+	3	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	7	6	1	0
<20 & OR <5	1	10	12	1	0
VSBY ≥5	11	45	40	2	0
≥50 & ≥5	9	34	26	1	0
NC & ≥10	9	33	25	1	0

254

40

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	+	1	1	1	0
VSBY <2	0	0	0	+	0
<10 & OR <2	+	2	3	2	0
<20 & OR <5	+	4	9	3	+
VSBY ≥5	4	27	60	8	0
≥50 & ≥5	3	22	47	4	0
NC & ≥10	3	22	46	4	0

520

41

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	1	8	1	0
<20 & OR <5	0	1	18	1	0
VSBY ≥5	+	30	64	3	0
≥50 & ≥5	+	26	42	2	0
NC & ≥10	+	26	38	2	0

204

WIND SP

LCC – VSBY	0–3
<1.5 & OR <.5	
<6 & OR <2	
VSBY <2	
<10 & OR <2	
<20 & OR <5	
VSBY ≥5	
≥50 & ≥5	
NC & ≥10	

Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

V

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	+	+	+	+	0
	+	+	+	+	+
	+	+	+	+	+
	+	+	1	+	+
	+	2	6	4	+
	4	26	50	17	1
	3	18	31	7	+
	3	17	27	6	+

4143

X

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	0	+	+	1	1
VSBY <2	0	+	+	1	1
<10 & OR <2	0	+	1	1	1
<20 & OR <5	+	2	8	9	4
VSBY ≥5	3	15	45	21	3
≥50 & ≥5	2	12	31	12	1
NC & ≥10	2	10	27	9	+

1124

1

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	1	0
<6 & OR <2	0	0	2	3	0
VSBY <2	0	0	1	1	0
<10 & OR <2	0	0	7	6	0
<20 & OR <5	1	7	18	8	0
VSBY ≥5	3	32	54	8	0
≥50 & ≥5	2	18	28	2	0
NC & ≥10	1	7	21	2	0

107

2

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	+	1	0
<6 & OR <2	1	1	3	6	2
VSBY <2	1	1	2	5	1
<10 & OR <2	1	2	5	11	3
<20 & OR <5	1	9	24	31	9
VSBY ≥5	1	12	30	27	4
≥50 & ≥5	+	3	8	7	1
NC & ≥10	+	3	6	3	+

434

3

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	1	+
<6 & OR <2	1	1	4	2	1
VSBY <2	+	1	3	1	1
<10 & OR <2	1	2	5	3	1
<20 & OR <5	2	8	15	8	3
VSBY ≥5	4	27	33	13	3
≥50 & ≥5	2	15	12	2	1
NC & ≥10	1	10	7	1	+

662

4

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	1	+
<6 & OR <2	1	1	3	1	1
VSBY <2	+	1	2	1	1
<10 & OR <2	1	2	4	2	1
<20 & OR <5	2	4	9	6	2
VSBY ≥5	9	24	36	16	4
≥50 & ≥5	7	16	23	10	2
NC & ≥10	6	14	20	8	2

916

5

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	2	+
<6 & OR <2	0	+	3	4	2
VSBY <2	0	0	1	3	2
<10 & OR <2	0	1	5	5	2
<20 & OR <5	2	8	22	12	4
VSBY ≥5	3	21	41	17	4
≥50 & ≥5	1	10	14	6	1
NC & ≥10	1	8	10	3	1

435

9

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	0	1	1	1	1
	0	1	2	1	1
	0	0	1	+	1
	0	1	4	1	1
	+	5	10	5	2
	5	23	47	15	2
	3	14	28	6	1
	3	12	24	5	+

542

10

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	1
<6 & OR <2	+	1	3	4	2
VSBY <2	+	1	1	2	2
<10 & OR <2	+	1	6	7	2
<20 & OR <5	+	4	14	13	6
VSBY ≥5	1	12	39	25	8
≥50 & ≥5	+	5	16	7	2
NC & ≥10	+	4	11	5	1

1546

11

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	2	1
<6 & OR <2	+	2	5	4	2
VSBY <2	+	1	3	2	2
<10 & OR <2	+	5	10	9	4
<20 & OR <5	1	12	23	17	6
VSBY ≥5	1	21	34	18	4
≥50 & ≥5	1	8	14	6	1
NC & ≥10	+	7	11	4	1

2088

12

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	2	3	2	1
<6 & OR <2	+	3	5	5	3
VSBY <2	+	2	3	2	2
<10 & OR <2	+	4	12	12	6
<20 & OR <5	1	8	24	19	8
VSBY ≥5	1	14	37	22	5
≥50 & ≥5	1	6	14	7	1
NC & ≥10	+	5	10	4	1

1617

13

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	5	6	3
VSBY <2	+	1	2	3	1
<10 & OR <2	1	3	13	12	5
<20 & OR <5	1	8	22	21	8
VSBY ≥5	1	13	33	27	5
≥50 & ≥5	+	6	14	10	2
NC & ≥10	+	4	11	7	1

1392

14

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	1	1
<6 & OR <2	+	2	5	4	2
VSBY <2	+	1	3	2	2
<10 & OR <2	+	3	10	9	4
<20 & OR <5	1	8	21	20	6
VSBY ≥5	1	15	35	25	5
≥50 & ≥5	1	7	15	8	1
NC & ≥10	1	6	12	6	1

2036

15

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	0	0	0
<6 & OR <2	+	+	+	+	0
VSBY <2	+	0	+	0	0
<10 & OR <2	+	+	1	1	0
<20 & OR <5	1	2	5	2	0
VSBY ≥5	5	33	47	10	2
≥50 & ≥5	4	28	36	5	2
NC & ≥10	3	18	23	3	1

1129

19

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	1	1	1	+	+
	1	1	2	2	1
	1	1	1	1	+
	1	3	6	4	1
	1	7	16	8	2
	4	23	48	18	2
	2	13	22	8	+
	2	11	18	6	+

1555

20

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	0	0
VSBY <2	0	+	1	0	0
<10 & OR <2	0	2	2	+	+
<20 & OR <5	1	2	6	2	1
VSBY ≥5	5	47	37	7	2
≥50 & ≥5	3	40	27	4	+
NC & ≥10	2	37	23	3	0

444

21

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	1
<6 & OR <2	+	1	3	3	2
VSBY <2	+	+	1	1	1
<10 & OR <2	+	2	9	7	3
<20 & OR <5	1	7	19	14	4
VSBY ≥5	2	21	44	21	3
≥50 & ≥5	1	13	22	8	1
NC & ≥10	1	12	19	6	1

3020

22

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	1	+
<6 & OR <2	+	1	2	2	1
VSBY <2	0	+	+	1	+
<10 & OR <2	+	2	6	6	1
<20 & OR <5	+	6	15	10	2
VSBY ≥5	2	24	48	18	2
≥50 & ≥5	2	17	28	7	1
NC & ≥10	2	15	24	6	1

1895

23

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	+	+
<6 & OR <2	1	2	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	1	4	10	4	1
<20 & OR <5	2	7	21	10	2
VSBY ≥5	3	26	48	16	2
≥50 & ≥5	2	16	23	6	+
NC & ≥10	2	15	21	5	+

1248

24

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	4	9	5	1
<20 & OR <5	1	9	20	11	2
VSBY ≥5	4	26	45	19	3
≥50 & ≥5	3	15	20	7	1
NC & ≥10	2	14	18	5	1

1461

25

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	1	2	2	1
VSBY <2	+	+	+	+	+
<10 & OR <2	1	4	8	6	2
<20 & OR <5	1	9	18	10	2
VSBY ≥5	4	28	44	17	3
≥50 & ≥5	3	17	22	7	1
NC & ≥10	2	16	20	6	+

1831

29

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	0	+	+	+	+
	+	1	1	2	+
	0	+	+	1	+
	+	2	5	4	+
	+	5	15	9	1
	2	23	47	18	1
	2	17	30	9	1
	1	14	25	7	+

2626

30

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	5	1	+
<20 & OR <5	1	5	11	4	+
VSBY ≥5	5	34	47	11	1
≥50 & ≥5	4	26	30	7	+
NC & ≥10	4	24	28	6	+

1407

31

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	0	+	+	+
<6 & OR <2	+	1	1	+	+
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	4	1	+
<20 & OR <5	+	5	9	3	+
VSBY ≥5	4	35	52	8	+
≥50 & ≥5	4	28	38	5	0
NC & ≥10	4	26	36	4	0

1601

32

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	4	+	0
<20 & OR <5	1	5	12	1	0
VSBY ≥5	6	32	56	5	+
≥50 & ≥5	5	25	41	3	+
NC & ≥10	5	25	39	3	+

4098

33

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	+	+	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	+	2	3	1	0
<20 & OR <5	1	5	9	1	0
VSBY ≥5	6	33	55	6	+
≥50 & ≥5	5	24	34	3	0
NC & ≥10	5	22	28	3	0

1708

34

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	2	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	+	4	7	2	+
<20 & OR <5	1	9	14	3	+
VSBY ≥5	9	42	37	4	+
≥50 & ≥5	8	34	24	1	+
NC & ≥10	7	29	20	1	0

5440

35

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	0	+	1	2	+
VSBY <2	0	+	1	1	+
<10 & OR <2	+	1	4	4	1
<20 & OR <5	+	3	11	11	2
VSBY ≥5	2	17	44	26	2
≥50 & ≥5	2	14	33	16	1
NC & ≥10	2	13	27	12	1

6384

39

WIND SPEED (KNOTS)

	0-3	4-10	11-21	22-33	≥34
	0	+	0	0	0
)	+	3	0	0	0
	0	0	0	0	0
	1	7	6	1	0
	1	10	12	1	0
	11	45	40	2	0
	9	34	26	1	0
	9	33	25	1	0

254

40

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	+	0
<6 & OR <2	+	1	1	1	0
VSBY <2	0	0	0	+	0
<10 & OR <2	+	2	3	2	0
<20 & OR <5	+	4	9	3	+
VSBY ≥5	4	27	60	8	0
≥50 & ≥5	3	22	47	4	0
NC & ≥10	3	22	46	4	0

520

41

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	1	8	1	0
<20 & OR <5	0	1	18	1	0
VSBY ≥5	+	30	64	3	0
≥50 & ≥5	+	26	42	2	0
NC & ≥10	+	26	38	2	0

204

42

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	1	3	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	3	11	2	0
<20 & OR <5	+	10	25	3	0
VSBY ≥5	2	29	64	4	0
≥50 & ≥5	1	16	34	1	0
NC & ≥10	1	15	31	1	0

734

43

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	1	2	3	+	0
<20 & OR <5	1	8	8	1	+
VSBY ≥5	9	56	32	2	+
≥50 & ≥5	8	46	21	1	0
NC & ≥10	8	45	21	+	0

820

44

WIND SPEED (KNOTS)

LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	1	1	2	+	+
VSBY <2	+	+	1	+	+
<10 & OR <2	2	6	4	+	+
<20 & OR <5	3	14	8	+	+
VSBY ≥5	19	55	19	1	0
≥50 & ≥5	16	39	12	+	0
NC & ≥10	14	34	10	+	0

2433

45

WIND SPEED (KNOTS)

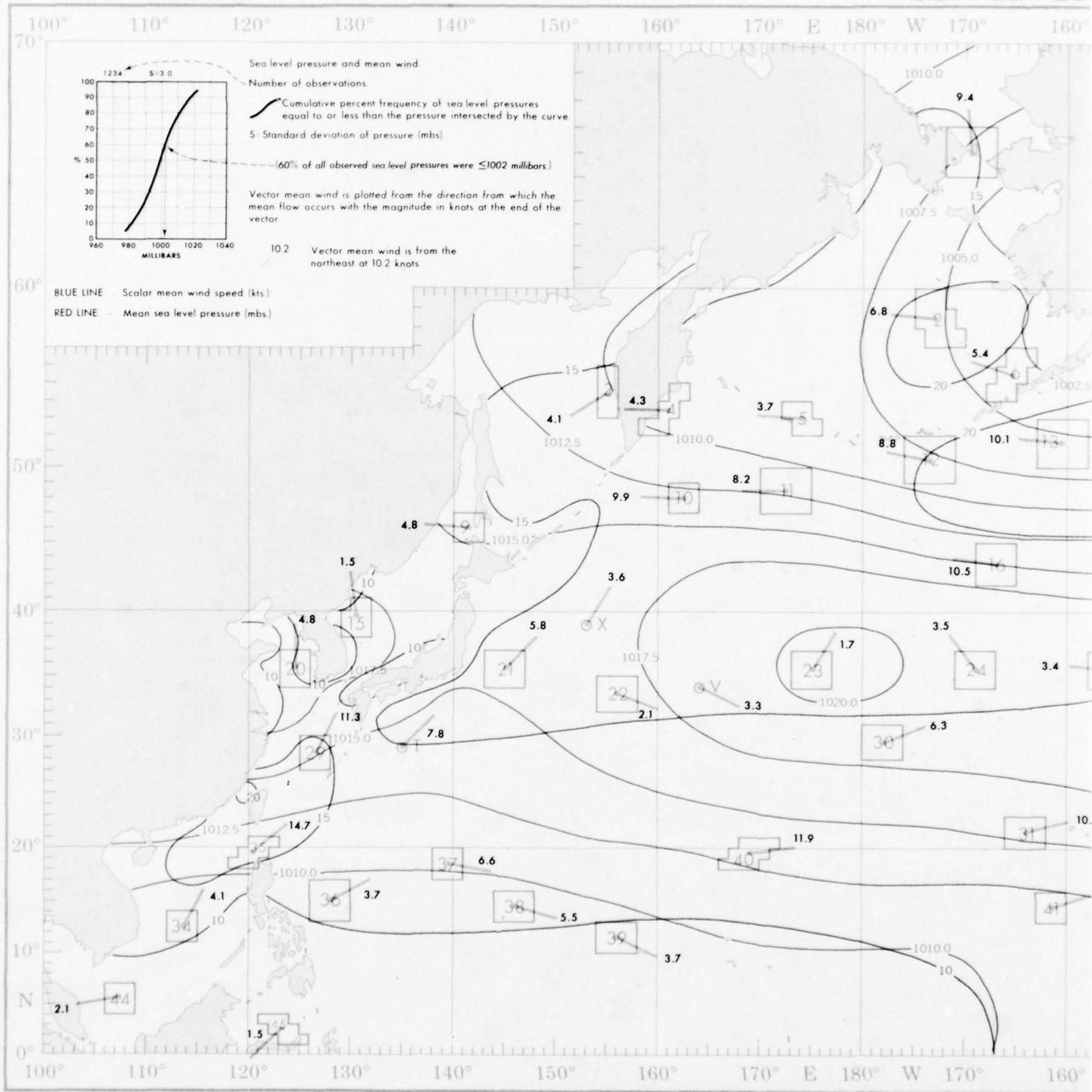
LCC + VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	1	0	0
<10 & OR <2	0	3	3	0	0
<20 & OR <5	1	4	4	0	0
VSBY ≥5	36	50	13	0	0
≥50 & ≥5	35	42	9	0	0
NC & ≥10	29	41	8	0	0

78

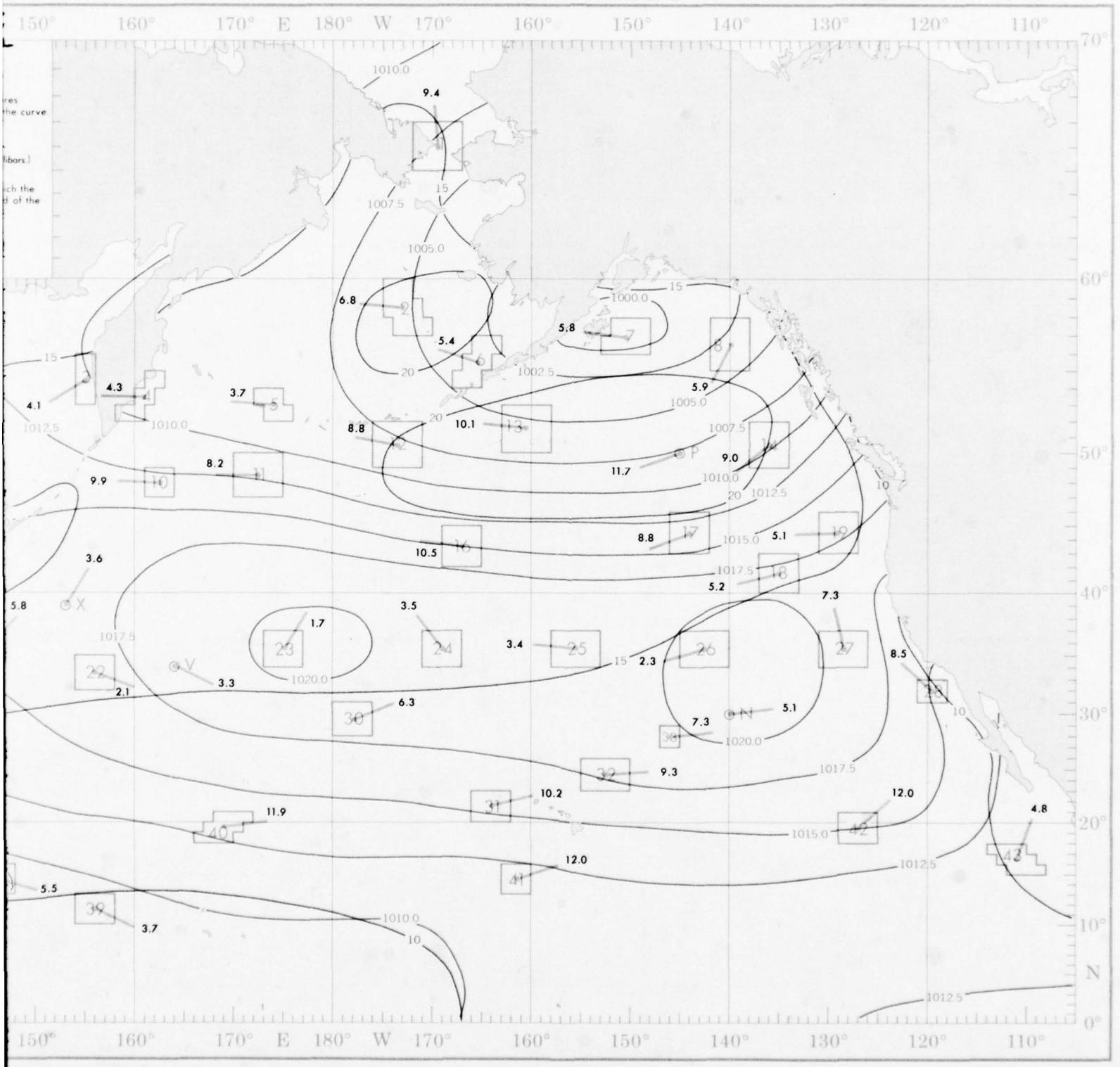
the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

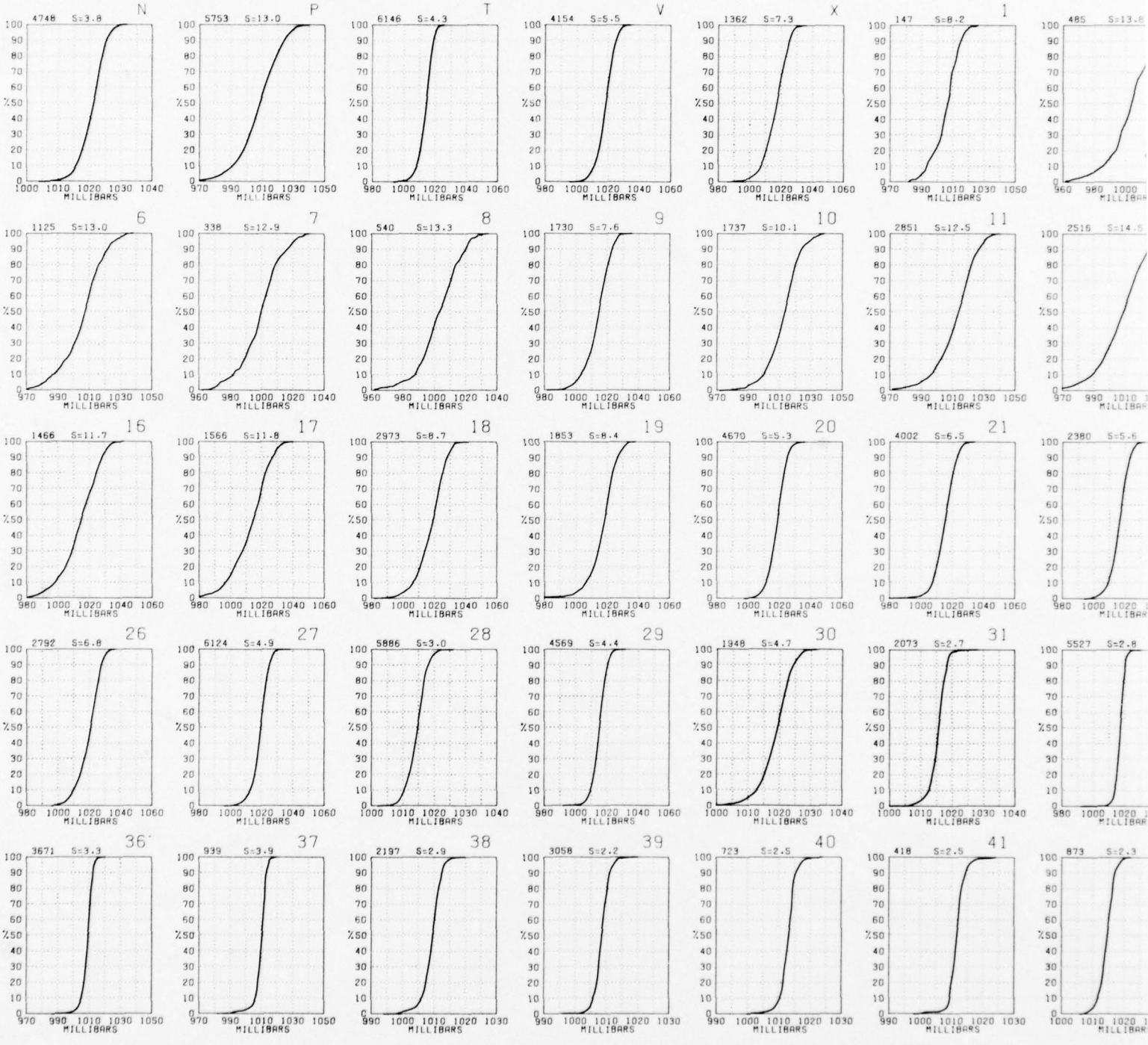
SEA LEVEL



SEA LEVEL PRESSURE AND MEAN WIND

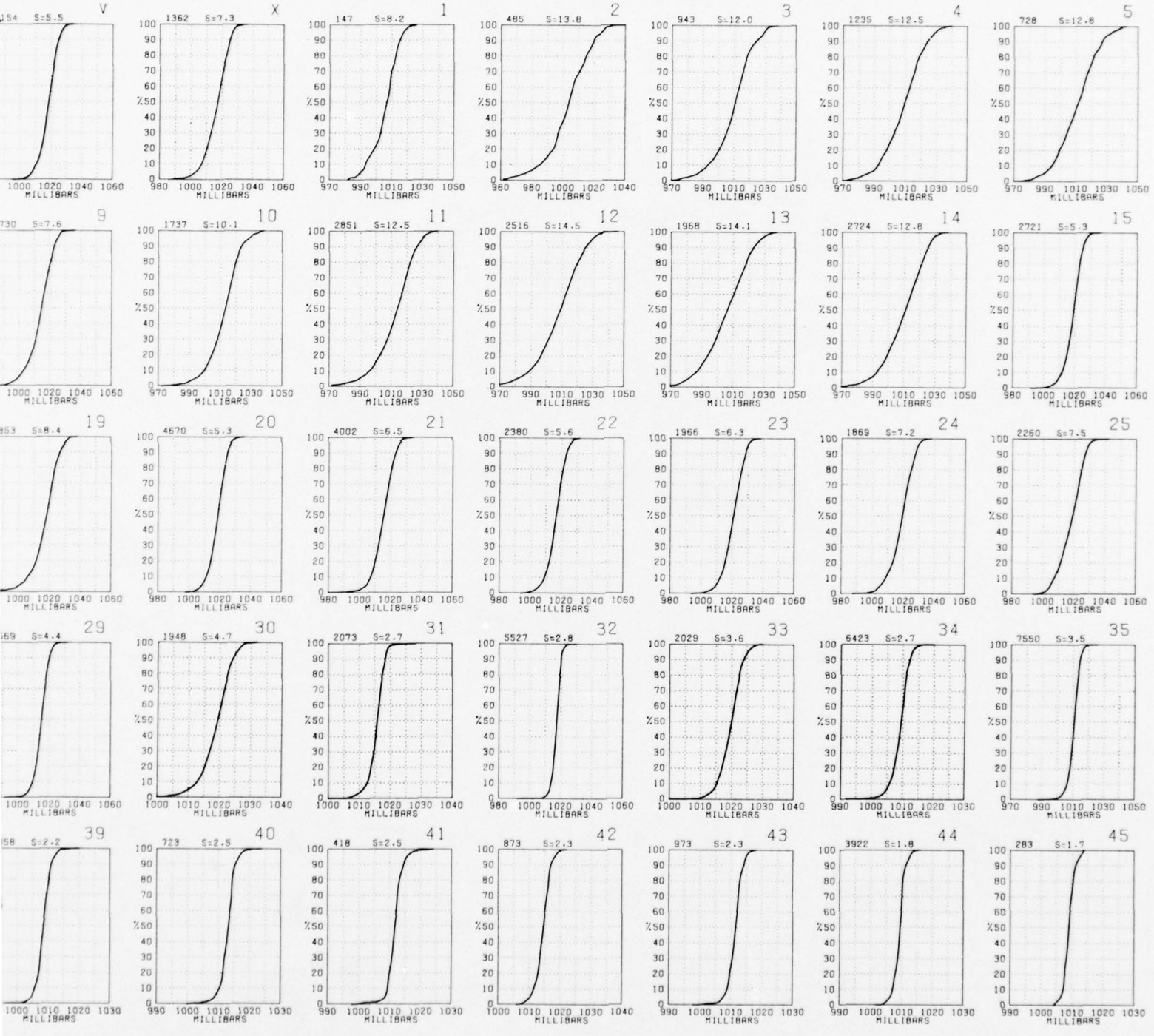


SEA LEVEL PRESSURE



Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

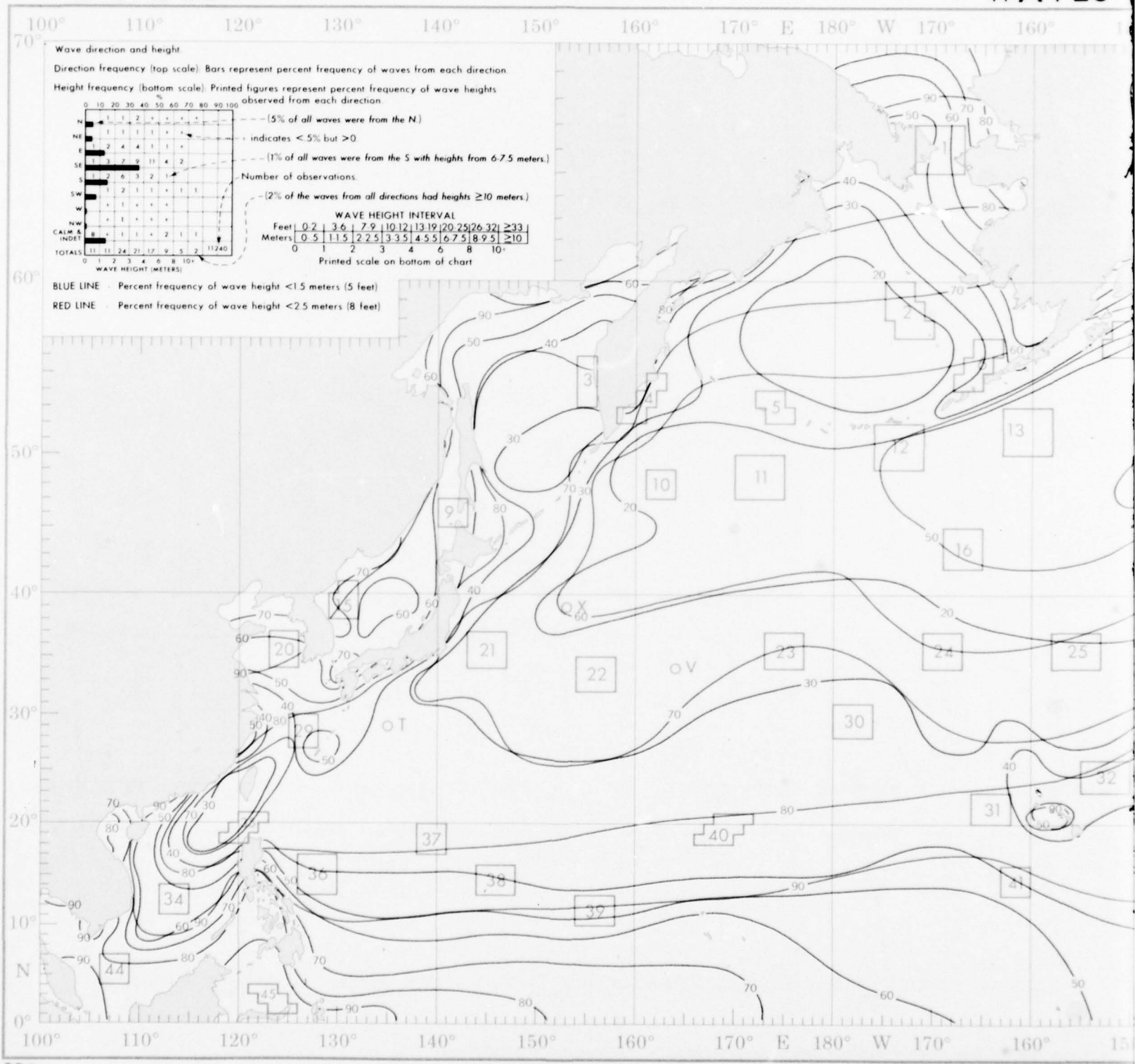
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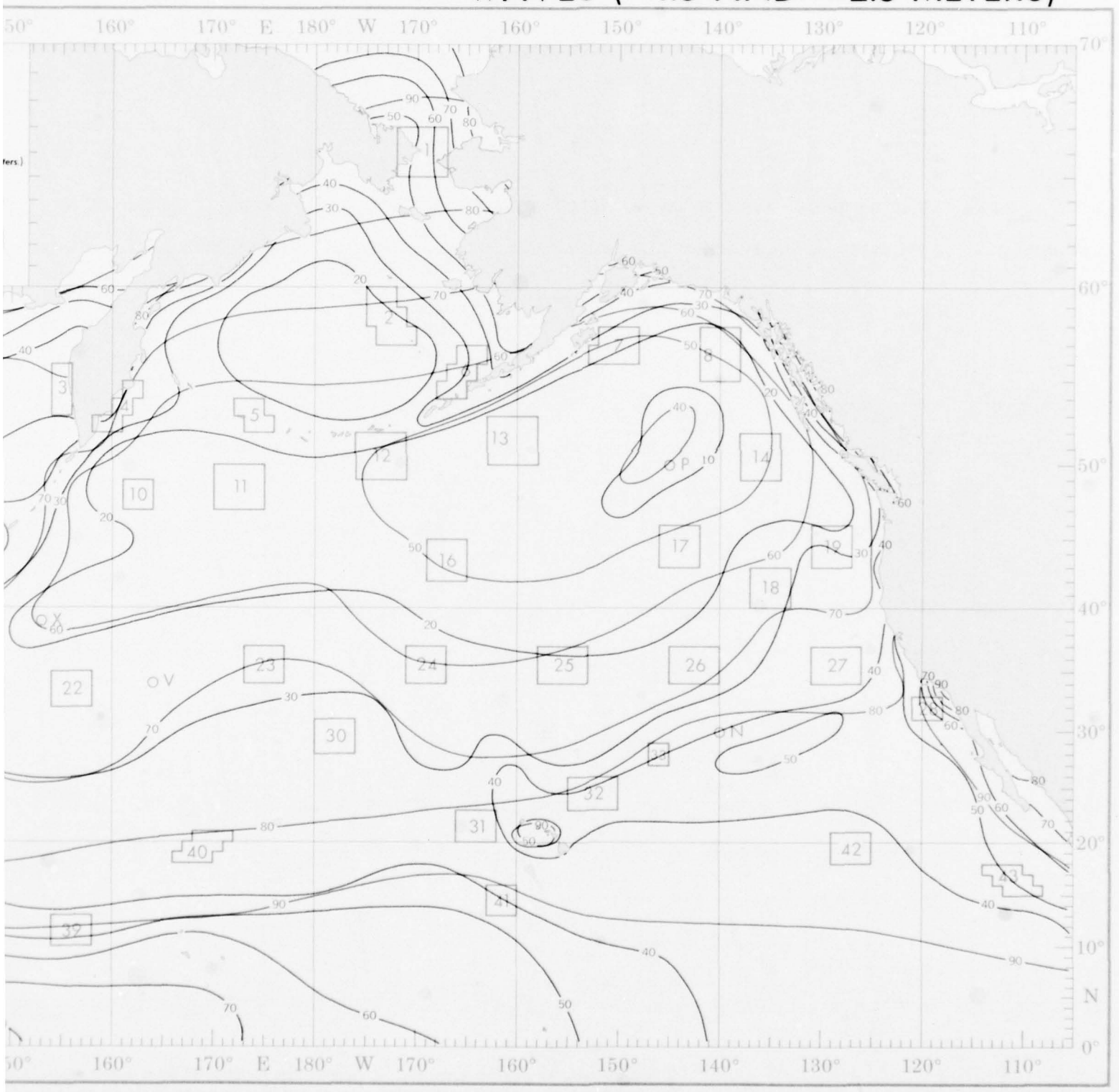
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alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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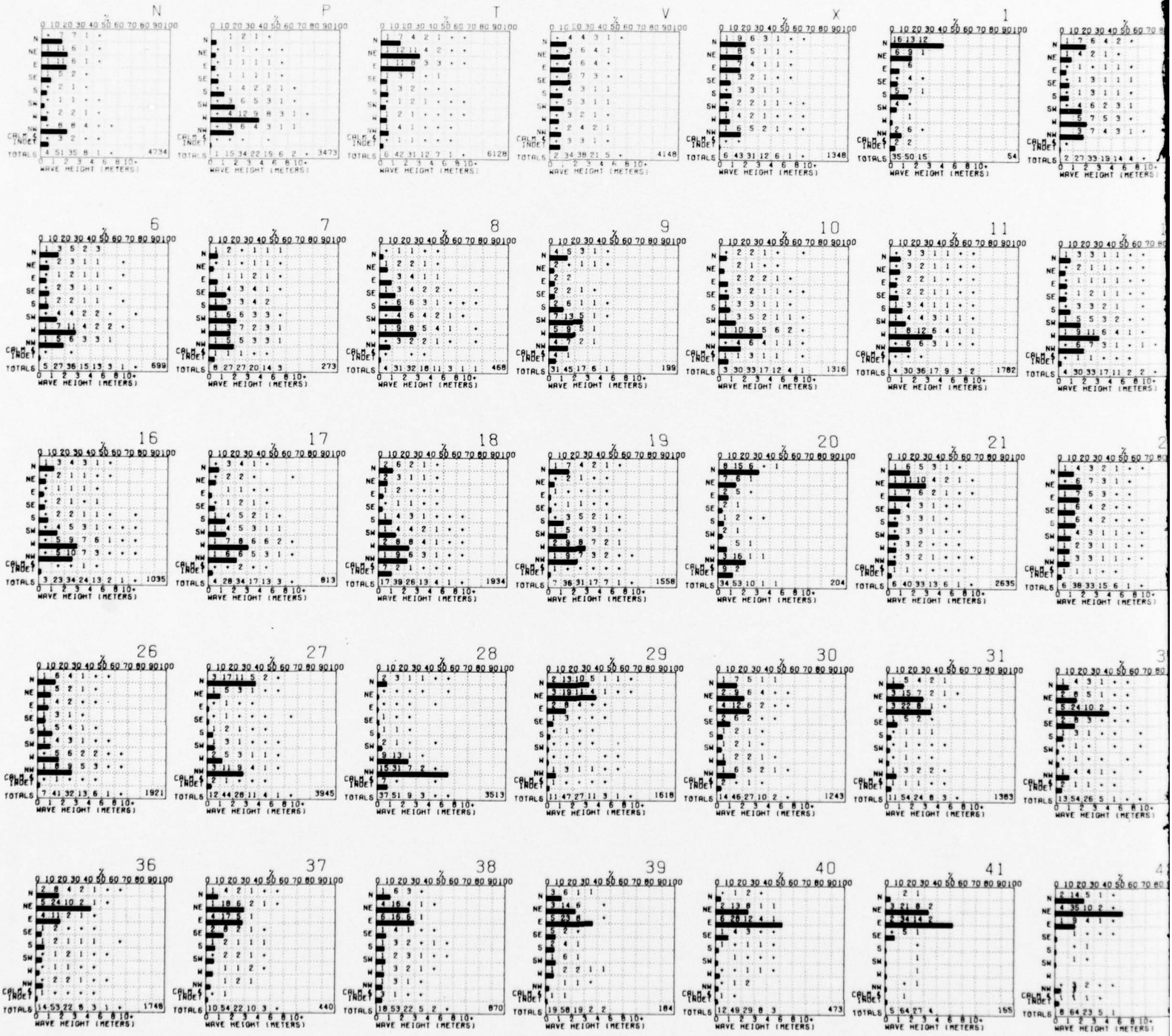
WAVES



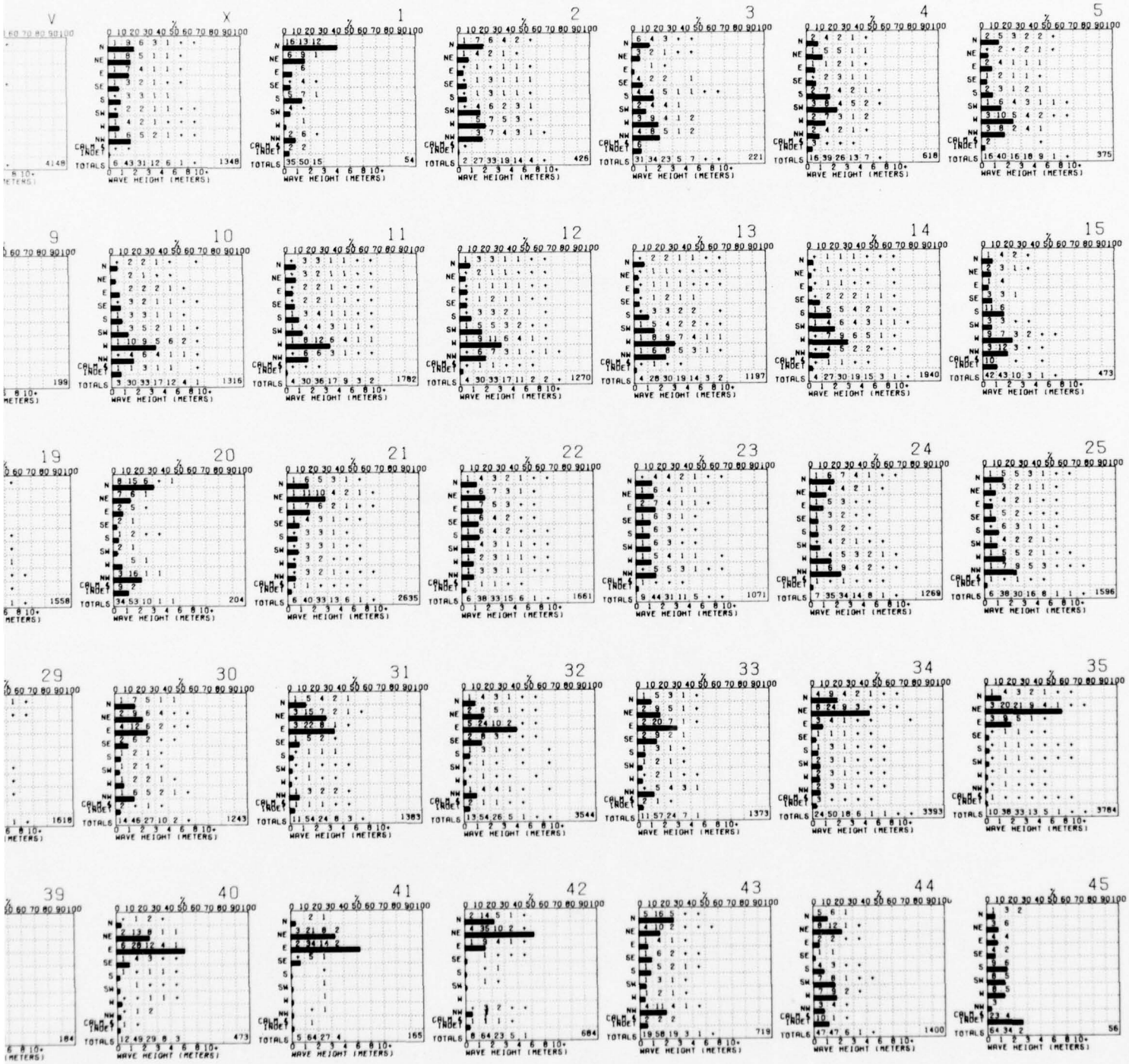
WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT



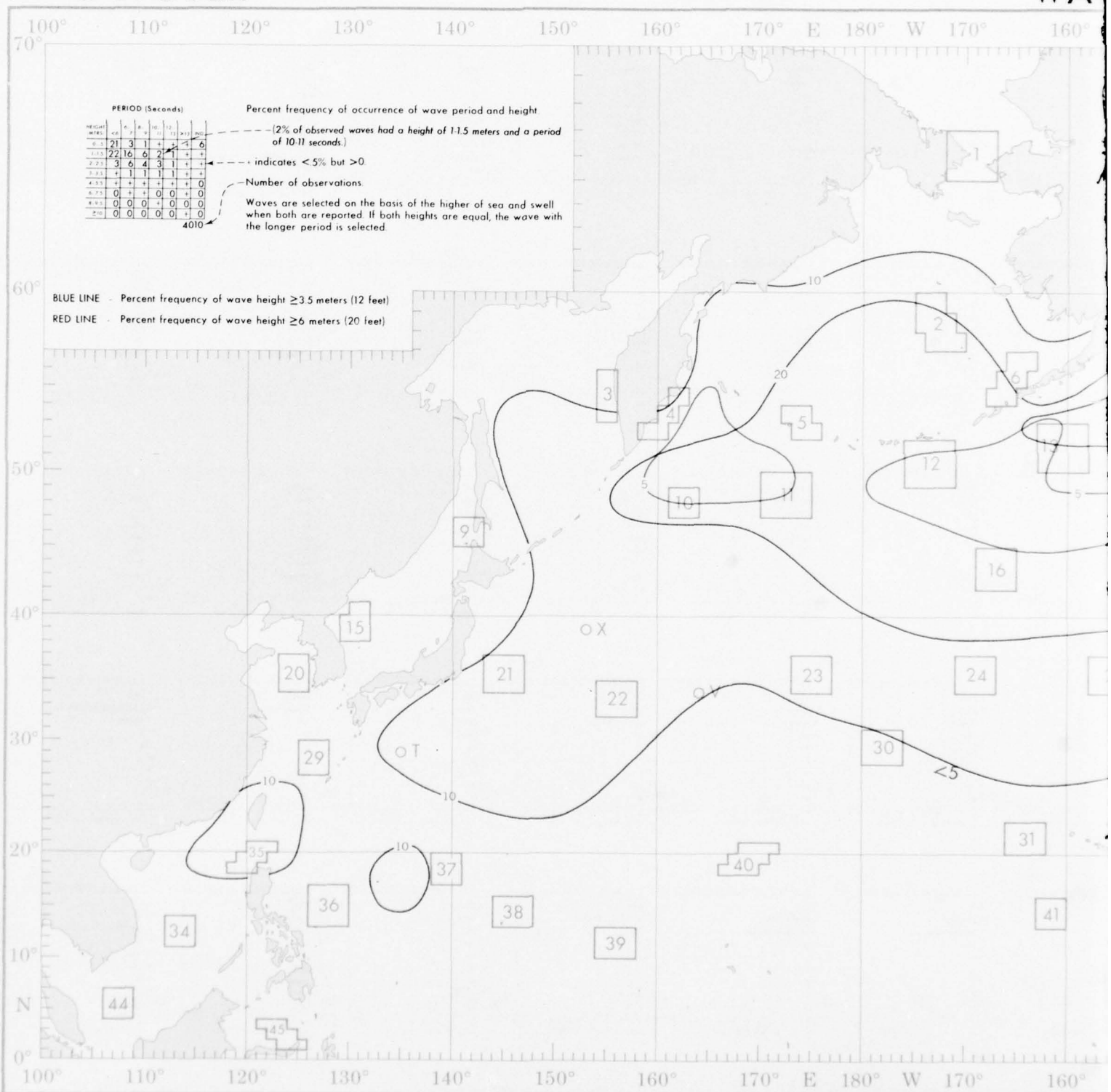
Graphs represent the objective compilation of available data for specified areas without regard to susp
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objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

OCTOBER

WA


100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
PERIOD (Seconds)
HEIGHT METERS
<4 4-7 8-9 10-11 12-13 >13 NO.
0-1.5 21 3 1 + + + 6
1.5-2.5 22 16 6 2 1 + +
2.5-3.5 3 6 4 3 1 + +
3.5-4.5 + 1 1 1 1 + +
4.5-6 + + + + + + 0
6-7.5 0 + + 0 0 + 0
7.5-9 0 0 0 + 0 0 0
9-10 0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but > 0.
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
10
20
5
<5
OX
OV
OT
1 2 3 4 5 6 9 10 11 12 15 16 20 21 22 23 24 29 30 31 34 35 36 37 38 39 40 41 44 45

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	+	+	0	0	+
1-1.5	15	20	11	2	+	+	3
2-2.5	3	13	12	5	1	+	2
3-3.5	+	2	3	3	1	1	+
4-5.5	+	+	+	+	+	+	+
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4740

P

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	5	6	2	1	1	+	+
2-2.5	2	15	10	6	1	+	+
3-3.5	1	7	10	4	1	+	0
4-5.5	+	3	9	5	2	+	+
6-7.5	0	+	2	2	1	+	0
8-9.5	0	+	1	1	1	+	+
≥10	0	0	+	0	0	0	0

3473

T

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	1	1	+	0	0	4
1-1.5	2	5	14	2	+	+	19
2-2.5	2	3	12	6	1	+	7
3-3.5	+	2	4	3	1	+	2
4-5.5	+	2	1	2	1	+	1
6-7.5	0	+	+	+	+	+	+
8-9.5	0	0	+	+	+	0	+
≥10	0	0	0	0	0	0	0

6140

V

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	9	12	7	3	+	0	3
2-2.5	3	14	15	2	+	+	3
3-3.5	+	5	10	3	1	0	1
4-5.5	+	1	3	1	+	0	+
6-7.5	0	0	0	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

4152

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	1	1	0	0	0	4
1-1.5	+	7	17	+	0	0	19
2-2.5	+	3	20	1	0	0	6
3-3.5	0	1	9	1	0	0	1
4-5.5	0	1	5	1	0	+	0
6-7.5	0	+	1	+	+	0	0
8-9.5	0	0	+	+	0	0	0
≥10	0	0	0	0	0	0	0

1348

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	37	0	0	0	0	0	2
1-1.5	32	5	0	0	4	2	5
2-2.5	5	4	4	0	0	0	2
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

57

PERIOD

HEIGHT (MTRS)	<6	6-7	8-9
0-.5	2	0	0
1-1.5	12	9	5
2-2.5	13	10	8
3-3.5	4	9	5
4-5.5	3	8	2
6-7.5	0	4	+
8-9.5	0	+	0
≥10	0	0	0

6

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	0	+	0	0	+
1-1.5	10	10	3	1	+	+	1
2-2.5	8	16	5	3	+	+	2
3-3.5	2	5	5	3	0	0	0
4-5.5	1	5	6	1	+	0	+
6-7.5	0	1	2	0	0	1	0
8-9.5	0	0	1	0	+	+	0
≥10	0	0	+	0	0	0	0

706

7

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	3	0	0	0	0	2
1-1.5	12	9	4	+	1	+	+
2-2.5	6	13	6	1	+	1	+
3-3.5	3	6	5	3	1	1	+
4-5.5	1	3	5	2	1	+	1
6-7.5	0	+	1	0	1	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

277

8

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	+
1-1.5	12	11	4	1	1	+	+
2-2.5	8	11	7	3	1	1	+
3-3.5	1	6	4	3	2	+	+
4-5.5	+	2	3	3	1	1	0
6-7.5	0	1	1	+	0	+	0
8-9.5	0	0	0	0	+	1	0
≥10	0	0	0	+	+	0	+

471

9

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	13	1	+	+	0	0	19
1-1.5	16	6	1	0	0	0	19
2-2.5	3	2	2	0	0	0	9
3-3.5	+	1	1	+	0	0	2
4-5.5	0	+	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

209

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	+	0	0	0	1
1-1.5	6	15	7	1	0	0	1
2-2.5	2	12	14	4	+	+	1
3-3.5	1	3	5	7	1	+	+
4-5.5	0	2	5	3	1	+	1
6-7.5	0	+	2	1	1	+	0
8-9.5	0	+	0	+	+	+	0
≥10	0	0	0	0	0	0	0

1319

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	0	0	0	1
1-1.5	9	13	6	1	+	+	+
2-2.5	3	10	15	5	1	+	+
3-3.5	1	4	5	4	2	1	+
4-5.5	+	2	3	2	1	1	+
6-7.5	0	+	1	1	+	+	0
8-9.5	0	0	+	+	1	+	+
≥10	0	0	0	0	0	0	0

1795

PERIOD

HEIGHT (MTRS)	<6	6-7	8-9
0-.5	4	1	0
1-1.5	11	13	3
2-2.5	4	9	12
3-3.5	1	4	5
4-5.5	1	2	4
6-7.5	0	+	+
8-9.5	0	+	+
≥10	0	0	0

16

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	0	0	0	+
1-1.5	6	12	3	1	1	+	1
2-2.5	3	16	9	3	1	+	1
3-3.5	1	8	9	3	2	+	1
4-5.5	1	2	6	1	1	+	1
6-7.5	0	+	1	+	1	+	0
8-9.5	0	0	0	+	+	+	0
≥10	0	0	0	+	0	0	+

1039

17

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	+	0	0	1
1-1.5	10	11	4	1	+	0	1
2-2.5	4	11	10	6	1	+	2
3-3.5	1	4	5	4	2	1	1
4-5.5	+	2	4	2	2	2	+
6-7.5	0	0	1	1	1	1	0
8-9.5	0	0	0	+	+	+	0
≥10	0	0	0	0	0	0	0

818

18

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	+	+	0	0	7
1-1.5	20	12	3	1	+	+	2
2-2.5	4	10	5	4	1	+	1
3-3.5	1	4	4	2	1	+	+
4-5.5	+	+	1	1	+	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	0	+	+	0
≥10	0	0	0	0	0	0	0

1954

19

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	3	+	+	0	0	1
1-1.5	10	12	10	3	1	+	1
2-2.5	3	8	12	6	1	+	1
3-3.5	1	3	5	4	3	1	1
4-5.5	1	1	3	1	1	1	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	0	+	+	0
≥10	0	0	0	0	0	0	0

1565

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	28	3	+	0	0	0	10
1-1.5	25	15	3	+	+	0	3
2-2.5	2	5	1	+	+	0	0
3-3.5	0	+	1	0	0	0	0
4-5.5	1	+	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

231

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	0	0	0	1
1-1.5	18	15	4	1	+	+	2
2-2.5	5	12	10	4	1	+	1
3-3.5	1	4	4	3	2	+	+
4-5.5	+	1	2	1	+	+	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	+	0	+	+	0	0
≥10	0	0	0	0	0	0	0

2658

PERIOD

HEIGHT (MTRS)	<6	6-7	8-9
0-.5	5	1	+
1-1.5	16	15	5
2-2.5	5	10	13
3-3.5	1	4	6
4-5.5	+	1	1
6-7.5	0	+	+
8-9.5	0	0	+
≥10	0	0	0

26

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	+
1-1.5	16	14	5	2	1	+	1
2-2.5	3	11	9	4	2	1	1
3-3.5	1	3	4	3	1	+	+
4-5.5	+	1	2	1	1	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

1951

27

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	+	3
1-1.5	20	14	5	2	1	+	1
2-2.5	4	9	8	4	1	1	+
3-3.5	1	3	3	2	1	1	+
4-5.5	+	1	1	1	+	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	+	0	0	0
≥10	0	0	0	0	0	0	0

4072

28

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	25	4	1	1	0	0	7
1-1.5	29	13	6	1	1	+	+
2-2.5	2	3	3	1	+	+	+
3-3.5	+	1	1	+	+	+	+
4-5.5	+	+	+	+	+	0	+
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3638

29

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	22	17	4	1	+	0	2
2-2.5	4	10	8	3	1	+	+
3-3.5	1	2	3	3	1	1	+
4-5.5	+	1	1	+	+	+	+
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	+	0	+	+	0
≥10	0	0	0	0	0	0	0

1642

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	11	1	+	+	0	0	3
1-1.5	21	14	5	2	1	+	1
2-2.5	3	9	8	3	1	1	1
3-3.5	1	3	3	2	+	+	+
4-5.5	0	+	1	1	+	+	+
6-7.5	0	0	+	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1265

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	1	+	0	0	1
1-1.5	25	18	6	2	2	0	2
2-2.5	4	10	7	2	1	1	1
3-3.5	1	3	2	1	1	+	+
4-5.5	+	1	+	1	+	0	+
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1399

PERIOD

HEIGHT (MTRS)	<6	6-7	8-9
0-.5	11	1	+
1-1.5	24	16	6
2-2.5	4	9	7
3-3.5	+	1	2
4-5.5	0	+	+
6-7.5	0	+	0
8-9.5	0	0	+
≥10	0	0	0

36

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	12	2	1	1	0	0	1
1-1.5	23	20	6	1	+	+	+
2-2.5	2	6	9	3	1	+	+
3-3.5	+	2	2	1	2	+	+
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	0	+	0	0	0
≥10	0	0	0	0	0	0	0

1789

37

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	2	0	+	0	0	1
1-1.5	27	17	6	2	+	0	2
2-2.5	3	6	6	4	1	+	+
3-3.5	0	4	3	3	+	0	0
4-5.5	0	+	1	1	+	+	0
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

448

38

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	15	1	1	1	0	0	3
1-1.5	22	16	8	3	1	+	1
2-2.5	3	7	6	3	1	+	+
3-3.5	0	1	2	1	+	+	+
4-5.5	+	+	1	+	+	0	0
6-7.5	0	+	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

894

39

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	17	2	0	0	0	0	3
1-1.5	23	20	10	1	1	0	1
2-2.5	3	9	4	1	1	1	1
3-3.5	1	1	1	0	0	0	0
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

192

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	+	0	0	0	0	2
1-1.5	26	15	5	+	+	0	1
2-2.5	6	10	8	2	1	+	1
3-3.5	+	3	2	1	+	+	0
4-5.5	+	0	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

479

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	1	0	0	0	0
1-1.5	28	23	8	1	1	0	2
2-2.5	4	13	7	2	1	0	0
3-3.5	1	1	2	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

165

PERIOD

HEIGHT (MTRS)	<6	6-7	8-9
0-.5	7	+	+
1-1.5	28	23	8
2-2.5	4	6	8
3-3.5	1	1	1
4-5.5	0	0	+
6-7.5	0	0	0
8-9.5	0	0	0
≥10	0	0	0

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

V

PERIOD (SECONDS)

HEIGHT (MTRS)	6- 7	8- 9	10- 11	12- 13	>13	IND
	*	*	*	0	0	*
	12	7	3	*	0	3
	14	15	2	*	*	3
	5	10	3	1	0	1
	1	3	1	*	0	*
	0	0	*	*	*	0
	0	0	0	0	0	0
	0	0	0	0	0	0

4182

X

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	*	1	1	0	0	0	4
1-1.5	*	7	17	*	0	0	19
2-2.5	*	3	20	1	0	0	6
3-3.5	0	1	9	1	0	0	1
4-5.5	0	1	5	1	0	*	0
6-7.5	0	*	1	*	*	0	0
8-9.5	0	0	*	*	0	0	0
≥10	0	0	0	0	0	0	0

1348

1

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	37	0	0	0	0	0	2
1-1.5	32	5	0	0	4	2	5
2-2.5	5	4	4	0	0	0	2
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	4	*	*	0	0	0
≥10	0	0	0	0	0	0	0

57

2

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	0	0	0	0	0	*
1-1.5	12	9	5	1	0	0	*
2-2.5	13	10	8	2	0	0	*
3-3.5	4	9	5	1	0	0	*
4-5.5	3	8	2	1	0	0	0
6-7.5	0	4	*	*	0	0	0
8-9.5	0	*	0	0	0	0	0
≥10	0	0	0	0	0	0	0

427

3

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	18	3	*	0	0	0	16
1-1.5	19	8	1	0	0	0	3
2-2.5	7	7	4	*	*	0	2
3-3.5	1	*	1	*	*	0	*
4-5.5	1	2	2	*	0	0	1
6-7.5	0	0	0	*	0	0	0
8-9.5	0	0	0	*	0	0	0
≥10	0	0	0	0	0	0	0

243

4

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	1	*	0	0	0	8
1-1.5	18	6	1	1	*	*	9
2-2.5	7	8	3	1	*	*	6
3-3.5	2	3	3	2	*	0	3
4-5.5	*	1	2	1	*	*	2
6-7.5	0	0	0	0	0	0	*
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

634

5

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	*	0	0	0	0	10
1-1.5	12	10	3	*	*	0	15
2-2.5	3	5	3	*	0	0	5
3-3.5	1	6	7	1	*	1	2
4-5.5	1	2	2	1	1	1	1
6-7.5	0	1	0	0	0	0	1
8-9.5	0	0	0	0	*	0	0
≥10	0	0	0	0	0	0	0

378

9

PERIOD (SECONDS)

HEIGHT (MTRS)	6- 7	8- 9	10- 11	12- 13	>13	IND
	1	*	*	0	0	19
	6	1	0	0	0	19
	2	2	0	0	0	9
	1	1	*	0	0	2
	*	0	0	*	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

209

10

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	*	0	0	0	1
1-1.5	6	15	7	1	0	0	1
2-2.5	2	12	14	4	*	*	1
3-3.5	1	3	5	7	1	*	*
4-5.5	0	2	5	3	1	*	1
6-7.5	0	*	2	1	1	*	0
8-9.5	0	*	0	*	*	*	0
≥10	0	0	0	0	0	0	0

1319

11

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	0	0	0	1
1-1.5	9	13	6	1	*	*	1
2-2.5	3	10	15	5	1	*	*
3-3.5	1	4	5	4	2	1	*
4-5.5	*	2	3	2	1	1	*
6-7.5	0	*	1	1	*	*	0
8-9.5	0	0	*	*	1	*	0
≥10	0	0	0	0	0	*	0

1795

12

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	0	*	0	0	*
1-1.5	11	13	3	1	*	*	1
2-2.5	4	9	12	6	1	*	1
3-3.5	1	4	5	5	2	1	*
4-5.5	1	2	4	2	2	1	*
6-7.5	0	*	*	*	*	*	*
8-9.5	0	*	*	*	1	*	0
≥10	0	0	0	0	0	*	0

1279

13

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	*	*	0	0	*
1-1.5	12	11	3	1	*	*	1
2-2.5	5	11	10	4	1	*	*
3-3.5	2	6	6	3	2	1	*
4-5.5	*	2	5	3	2	1	*
6-7.5	0	1	1	*	1	1	*
8-9.5	0	*	*	*	*	*	0
≥10	0	0	0	0	0	0	0

1205

14

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	*	*	0	0	1
1-1.5	9	10	4	1	*	*	1
2-2.5	3	12	10	3	1	*	1
3-3.5	1	5	7	3	2	1	*
4-5.5	*	2	4	3	3	1	1
6-7.5	0	*	1	1	*	1	0
8-9.5	0	*	1	0	*	1	0
≥10	0	0	0	*	0	0	0

1948

15

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	33	*	0	0	0	0	10
1-1.5	38	3	*	*	0	0	1
2-2.5	5	3	1	0	*	0	1
3-3.5	0	1	2	0	*	0	0
4-5.5	*	*	*	0	0	0	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

480

19

PERIOD (SECONDS)

HEIGHT (MTRS)	6- 7	8- 9	10- 11	12- 13	>13	IND
	3	*	*	0	0	1
	12	10	3	1	*	1
	8	12	6	1	*	1
	3	5	4	3	1	1
	1	3	1	1	1	*
	0	*	*	*	*	0
	0	*	0	*	0	0
	0	0	0	0	0	0

1565

20

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	28	3	*	0	0	0	10
1-1.5	25	15	3	*	*	0	3
2-2.5	2	5	1	*	*	0	0
3-3.5	0	*	1	0	0	0	0
4-5.5	1	*	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

231

21

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	*	0	0	0	1
1-1.5	18	15	4	1	*	*	2
2-2.5	5	12	10	4	1	*	1
3-3.5	1	4	4	3	2	*	*
4-5.5	*	1	2	1	*	*	*
6-7.5	0	*	*	*	*	*	*
8-9.5	0	*	0	*	*	*	0
≥10	0	0	0	0	0	0	0

2658

22

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	*	0	0	0	1
1-1.5	16	15	5	1	1	0	1
2-2.5	5	10	13	3	*	*	1
3-3.5	1	4	6	3	1	*	1
4-5.5	*	1	1	2	1	1	*
6-7.5	0	*	*	*	1	*	0
8-9.5	0	0	*	*	*	*	0
≥10	0	0	0	0	0	0	0

1678

23

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	*	0	0	0	1
1-1.5	18	17	6	1	1	1	1
2-2.5	3	10	10	4	1	1	*
3-3.5	1	2	3	2	1	*	*
4-5.5	*	1	2	1	*	*	*
6-7.5	0	*	0	*	*	*	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1087

24

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	*	*	*	0	0	1
1-1.5	15	13	5	1	1	*	1
2-2.5	4	11	11	4	2	1	1
3-3.5	1	4	4	3	1	*	*
4-5.5	*	1	3	2	1	1	*
6-7.5	0	*	*	*	*	0	0
8-9.5	0	0	*	*	0	*	0
≥10	0	0	0	0	0	0	0

1291

25

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	*	*	0	0	1
1-1.5	17	13	5	1	*	*	1
2-2.5	3	10	9	4	2	1	1
3-3.5	1	5	4	3	2	1	*
4-5.5	*	1	3	2	1	1	*
6-7.5	0	*	*	*	*	*	*
8-9.5	0	0	*	0	*	*	0
≥10	0	0	0	*	0	0	0

1623

29

PERIOD (SECONDS)

HEIGHT (MTRS)	6- 7	8- 9	10- 11	12- 13	>13	IND
	1	*	*	0	0	1
	17	4	1	*	0	2
	10	8	3	1	*	*
	2	3	3	1	1	*
	1	1	*	*	*	*
	0	*	*	*	*	0
	0	*	0	0	*	0
	0	0	0	0	0	0

1642

30

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	*	*	0	0	3
1-1.5	21	14	5	2	1	*	1
2-2.5	3	9	8	3	1	1	1
3-3.5	1	3	3	2	*	*	*
4-5.5	0	*	1	1	*	*	*
6-7.5	0	0	*	*	*	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1265

31

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	1	1	*	0	0	1
1-1.5	25	18	6	2	2	0	2
2-2.5	4	10	7	2	1	1	1
3-3.5	1	3	2	1	1	*	*
4-5.5	*	1	*	1	*	0	*
6-7.5	0	*	*	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1399

32

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	*	*	0	0	3
1-1.5	24	16	6	2	1	1	3
2-2.5	4	9	7	3	1	1	1
3-3.5	*	1	2	1	1	*	*
4-5.5	0	*	*	*	*	*	*
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	*	0	0	*	0
≥10	0	0	0	0	0	0	0

3640

33

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	9	2	1	*	0	0	2
1-1.5	21	22	7	3	1	*	3
2-2.5	5	10	5	2	1	*	1
3-3.5	1	1	2	1	1	*	*
4-5.5	*	*	*	*	*	0	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1406

34

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	21	3	*	*	0	0	3
1-1.5	24	17	6	1	1	*	*
2-2.5	2	7	6	2	*	*	*
3-3.5	*	1	2	1	1	*	*
4-5.5	*	*	*	*	*	*	*
6-7.5	0	*	*	0	*	*	0
8-9.5	0	0	0	0	*	*	*
≥10	0	0	0	*	0	0	0

3514

35

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	16	17	3	*	*	*	*
2-2.5	5	11	11	4	1	*	*
3-3.5	1	4	4	2	1	*	*
4-5.5	*	1	2	1	1	*	*
6-7.5	0	*	*	*	1	*	0
8-9.5	0	0	0	*	*	*	*
≥10	0	0	*	0	0	*	0

3826

39

PERIOD (SECONDS)

HEIGHT (MTRS)	6- 7	8- 9	10- 11	12- 13	>13	IND
	2	0	0	0	0	3
	20	10	1	1	0	1
	9	4	1	1	1	1
	1	1	0	0	0	0
	1	1	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0
	0	0	0	0	0	0

192

40

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	10	*	0	0	0	0	2
1-1.5	26	15	5	*	*	0	1
2-2.5	6	10	8	2	1	*	1
3-3.5	*	3	2	1	*	*	0
4-5.5	*	0	1	1	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

479

41

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	1	0	0	0	0
1-1.5	28	23	8	1	1	0	2
2-2.5	4	13	7	2	1	0	0
3-3.5	1	1	2	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

165

42

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	*	*	0	0	0	1
1-1.5	28	23	8	1	1	0	3
2-2.5	4	6	8	2	*	*	1
3-3.5	1	1	1	*	*	*	*
4-5.5	0	0	*	*	0	0	0
6-7.5	0	0	0	0	0	0	*
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

687

43

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	1	1	1	0	0	4
1-1.5	25	16	9	2	2	*	2
2-2.5	3	6	5	2	1	1	1
3-3.5	*	1	2	*	*	0	0
4-5.5	0	*	*	0	*	0	*
6-7.5	0	0	0	0	0	0	*
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

751

44

PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	36	4	1	0	0	0	12
1-1.5	23	14	3	1	*	0	2
2-2.5	*	3	1	*	0	0	*
3-3.5	0	0	*	*	0	0	0
4-5.5	0	0	0	0	0	*	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1544

45

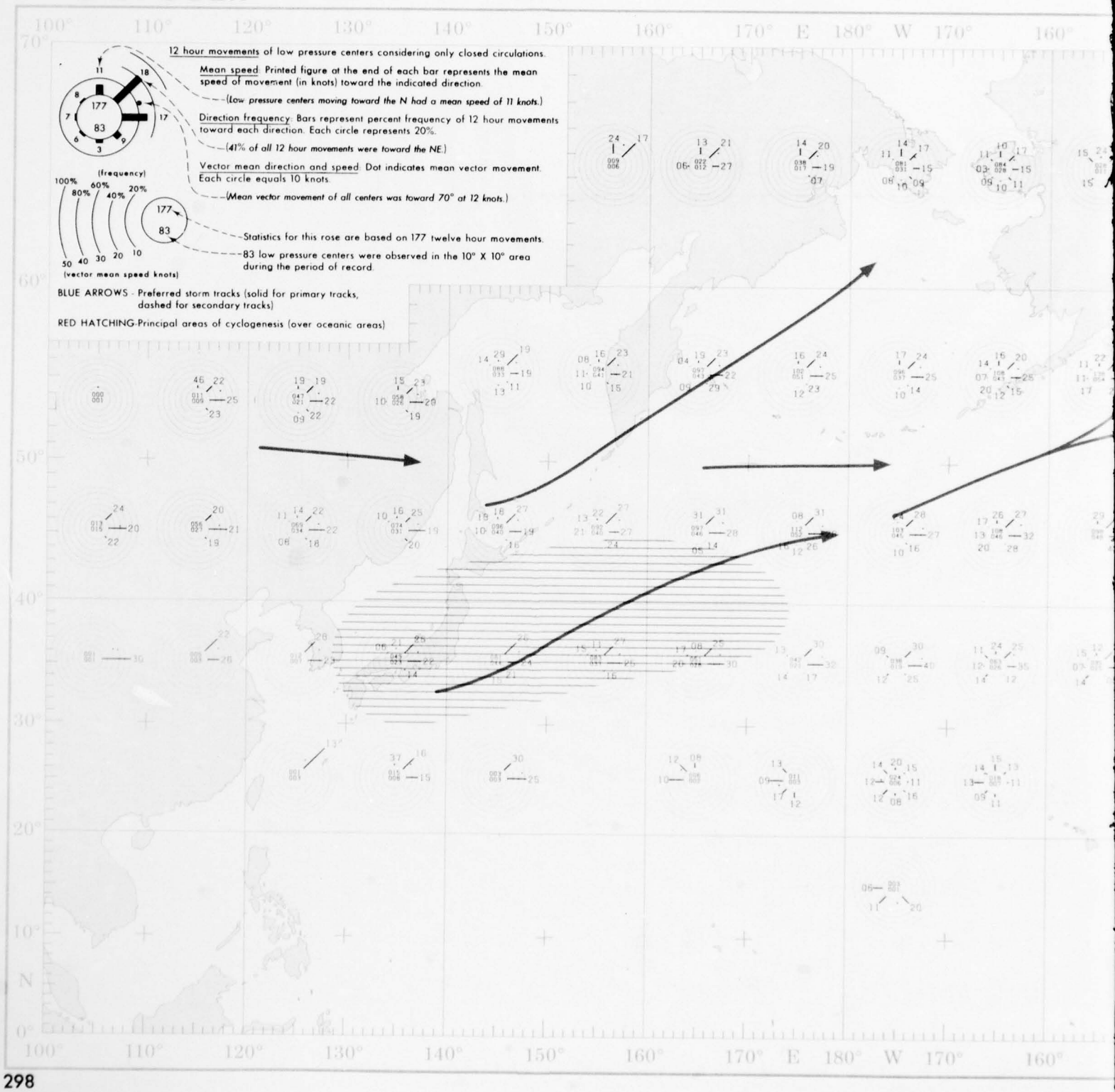
PERIOD (SECONDS)

HEIGHT (MTRS)	<6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	43	5	0	0	0	0	20
1-1.5	21	5	2	0	0	0	3
2-2.5	0	2	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

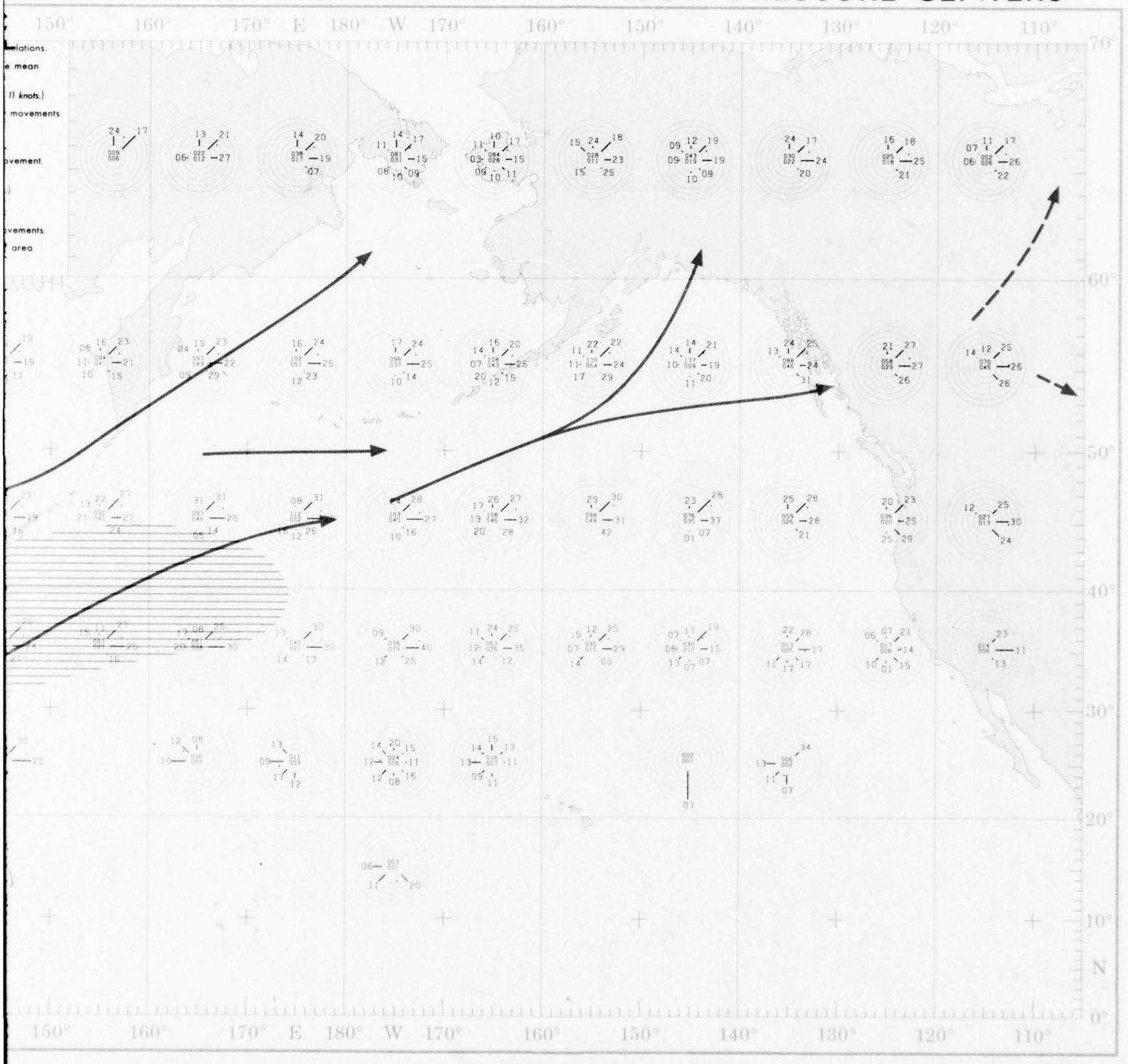
61

nt the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

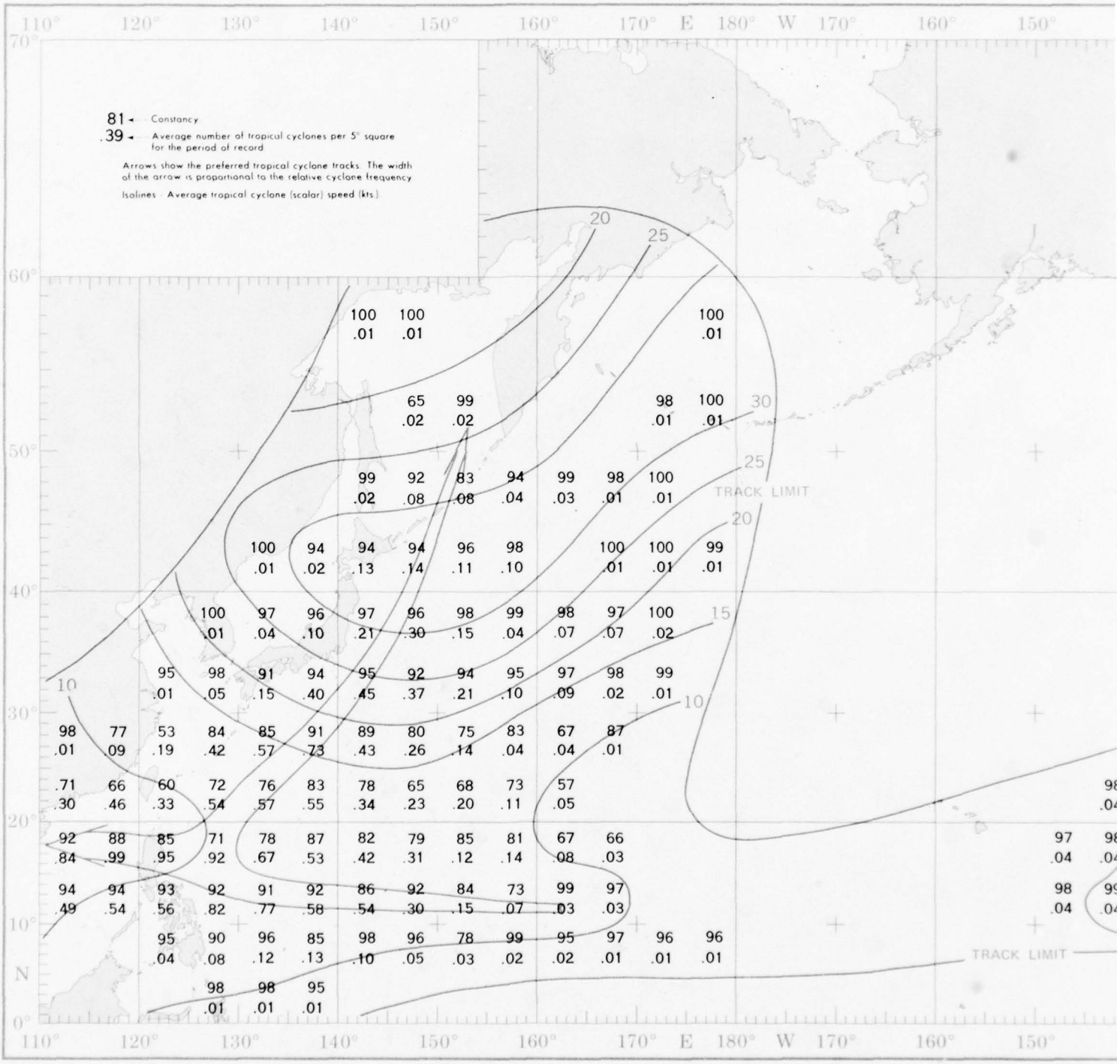
OCTOBER

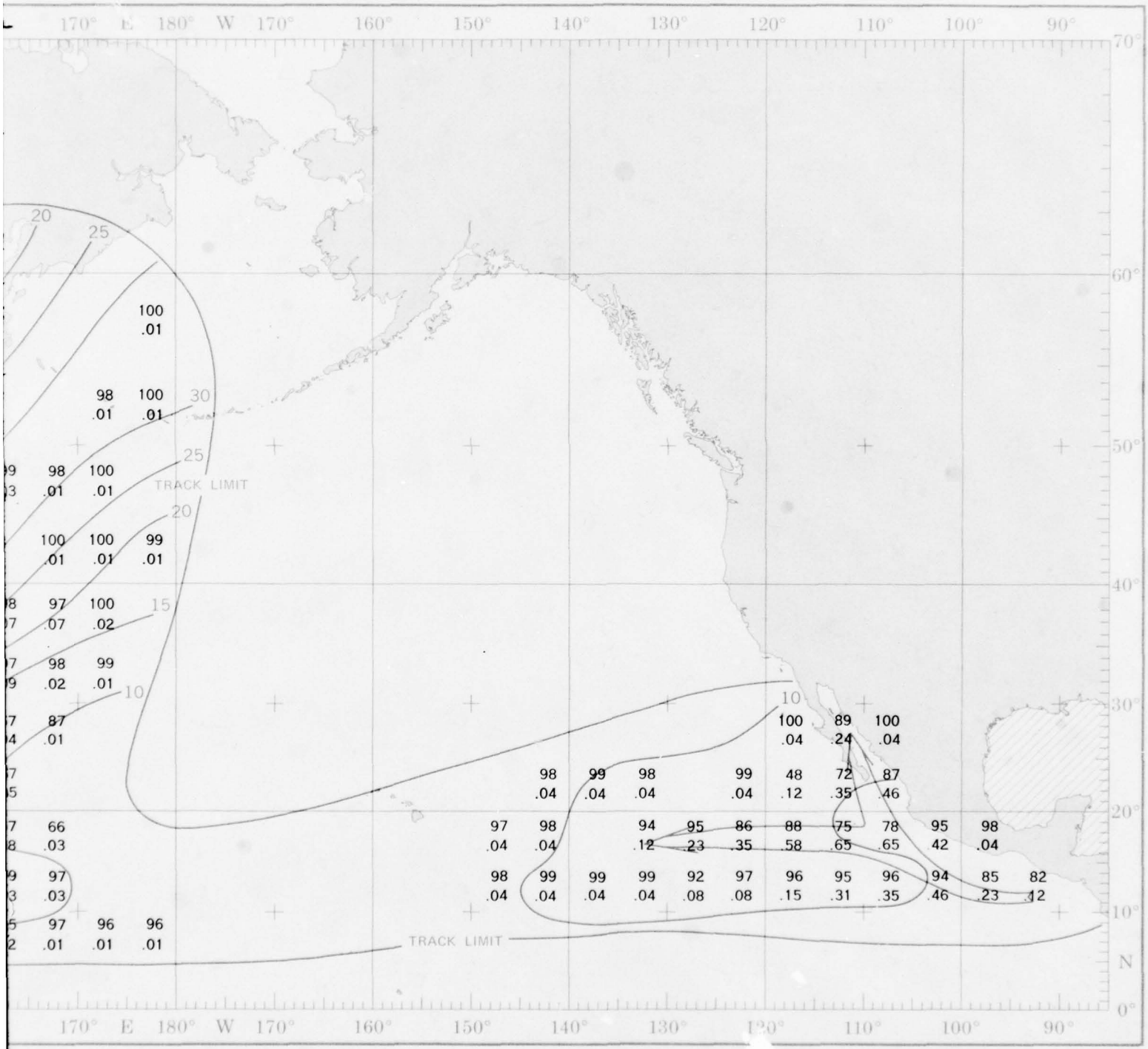

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
177
83
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

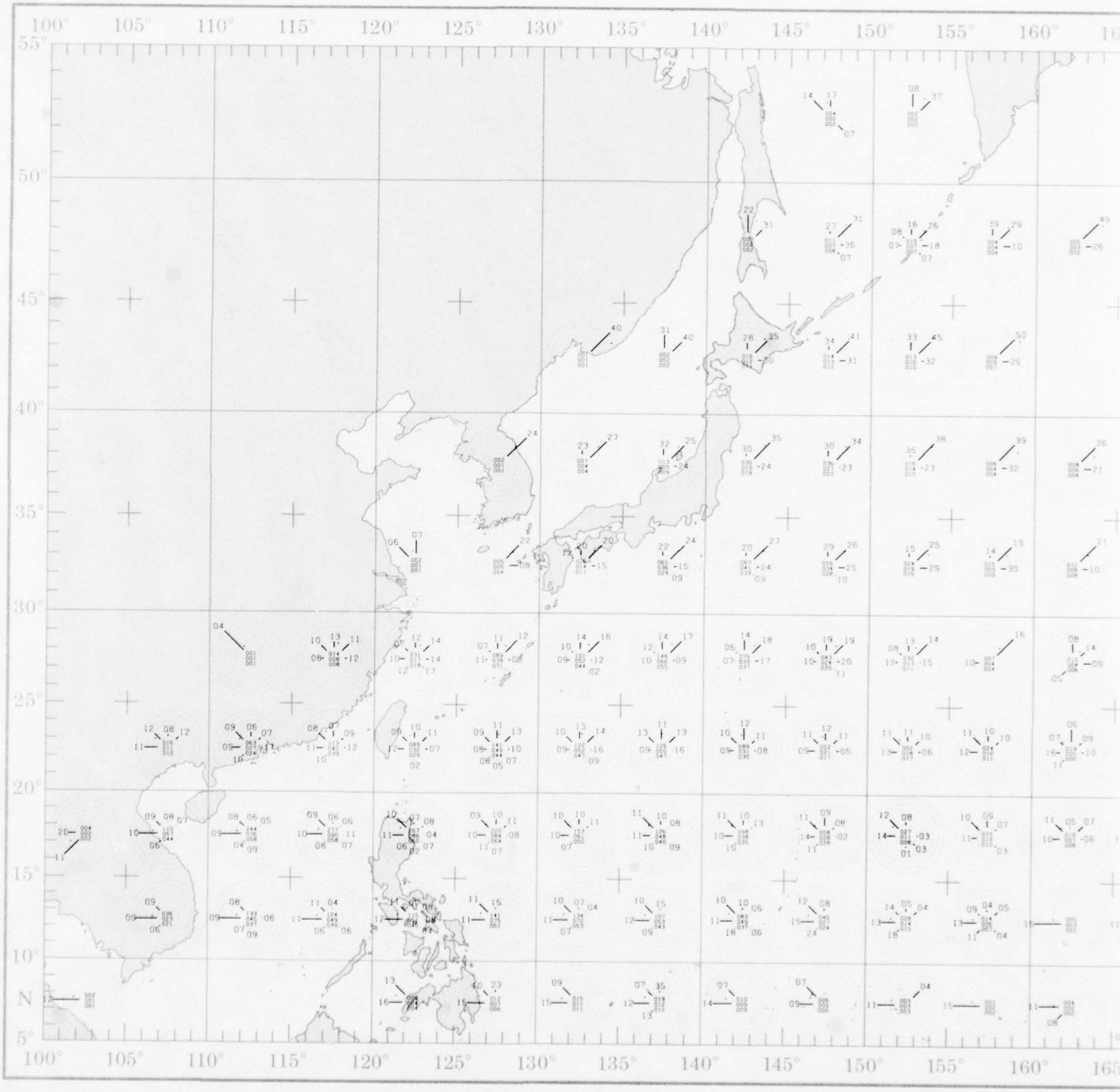


TROPICAL CYCLONE CHARACTERISTICS

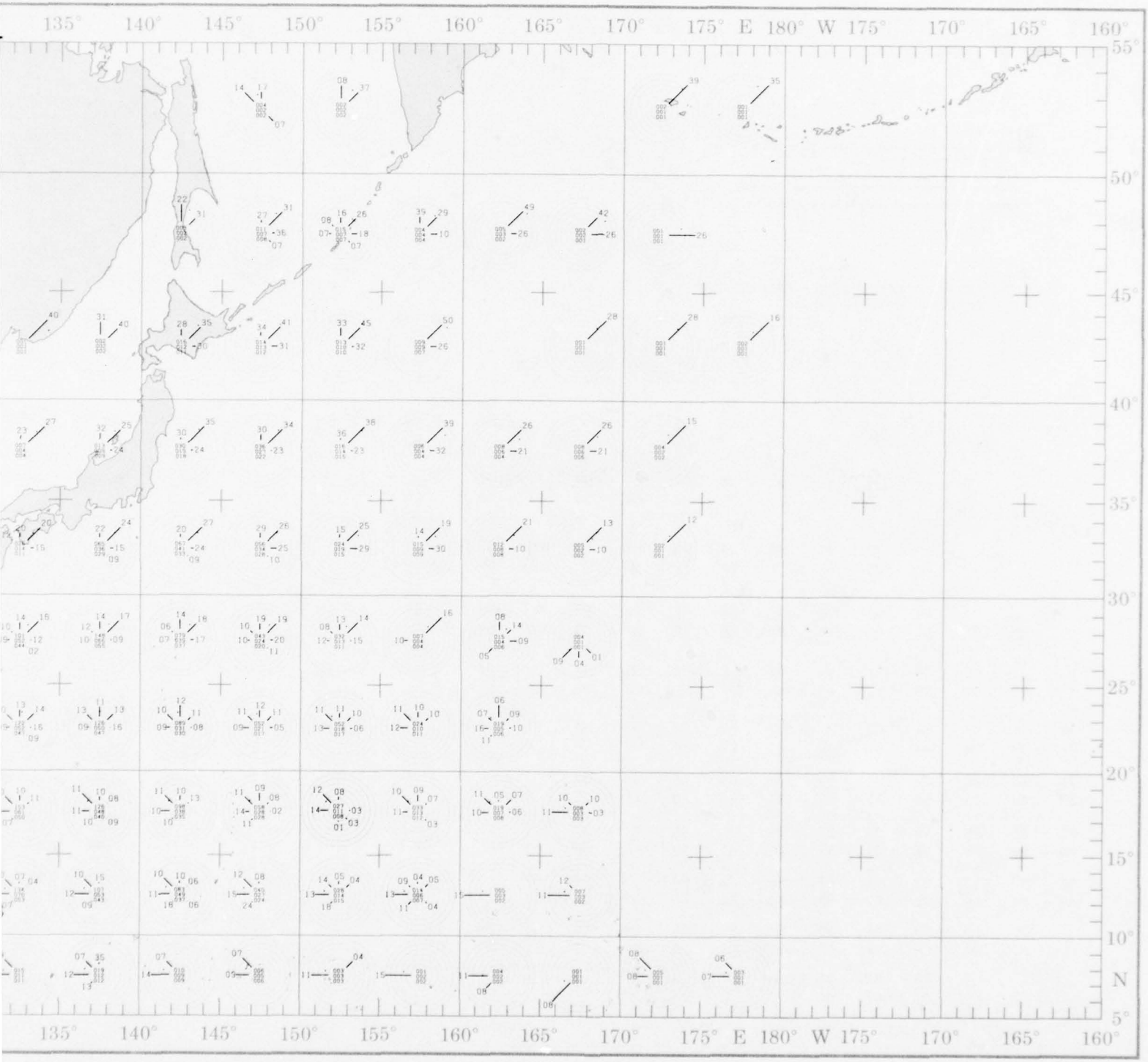



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
20
25
30
25
20
15
10
10
TRACK LIMIT
TRACK LIMIT
100 .01
98 100 .01 .01
98 100 .01 .01
100 100 99 .01 .01 .01
97 100 .07 .02
98 99 .02 .01
87 .01
100 89 100 .04 .24 .04
98 99 98 99 48 72 87 .04 .04 .04 .04 .12 .35 .46
66 .03
97 98 94 95 86 88 75 78 95 98 .04 .04 .12 .23 .35 .58 .65 .65 42 .04
97 .03
98 99 99 99 92 97 96 95 96 94 85 82 .04 .04 .04 .04 .08 .08 .15 .31 .35 .46 .23 .12
97 96 96 .01 .01 .01

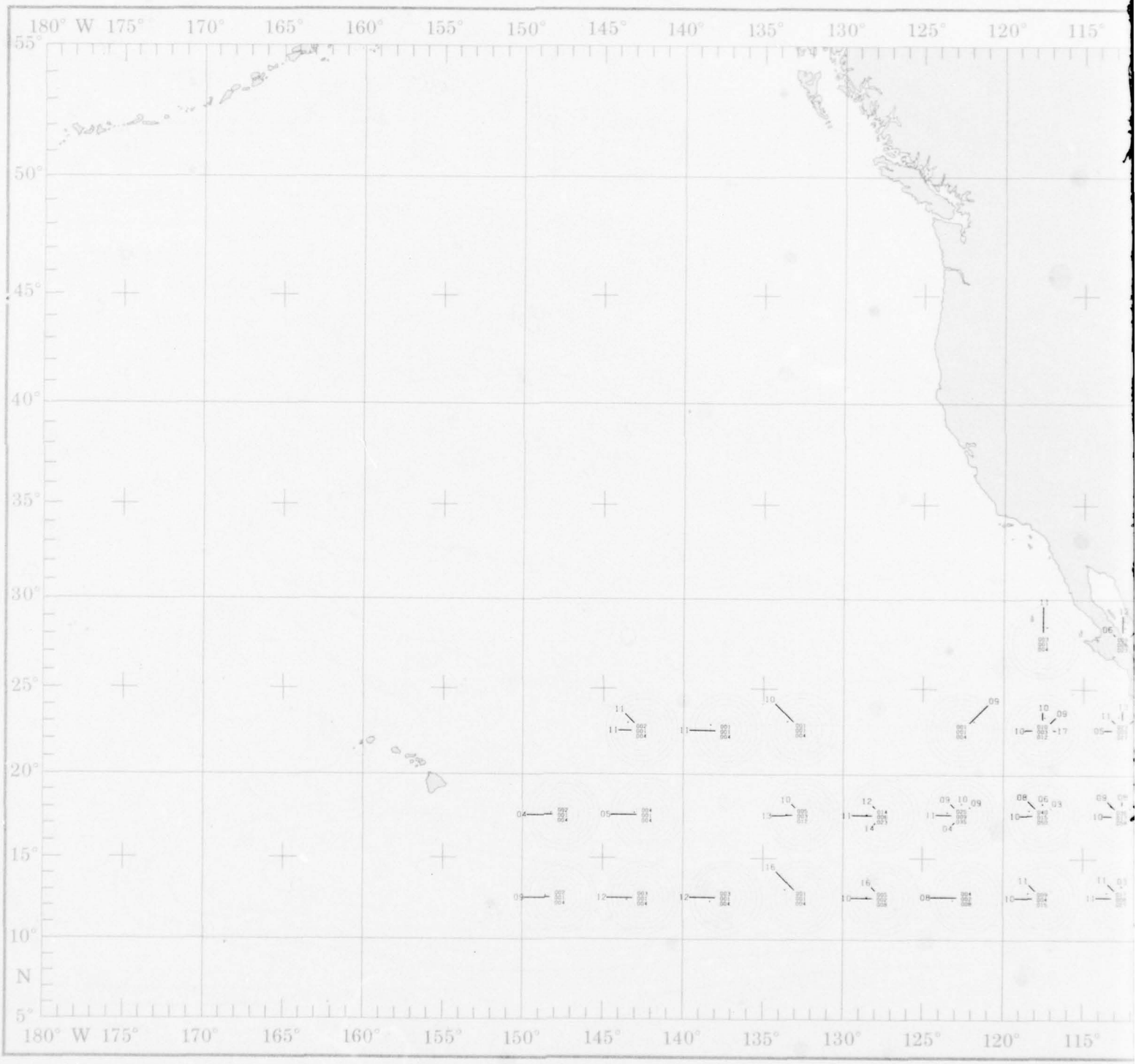
OCTOBER


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

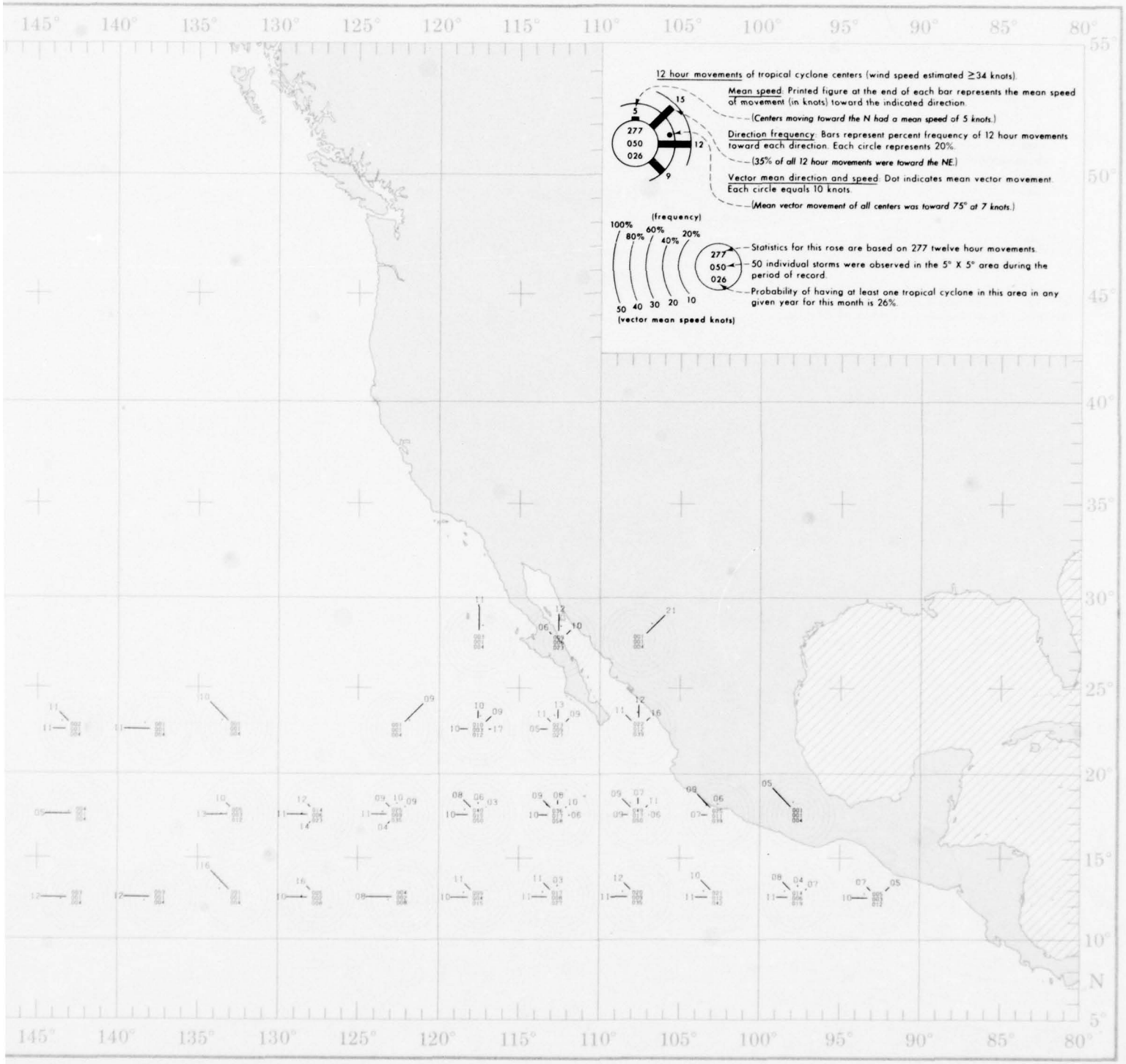
TROPICAL CYCLONE



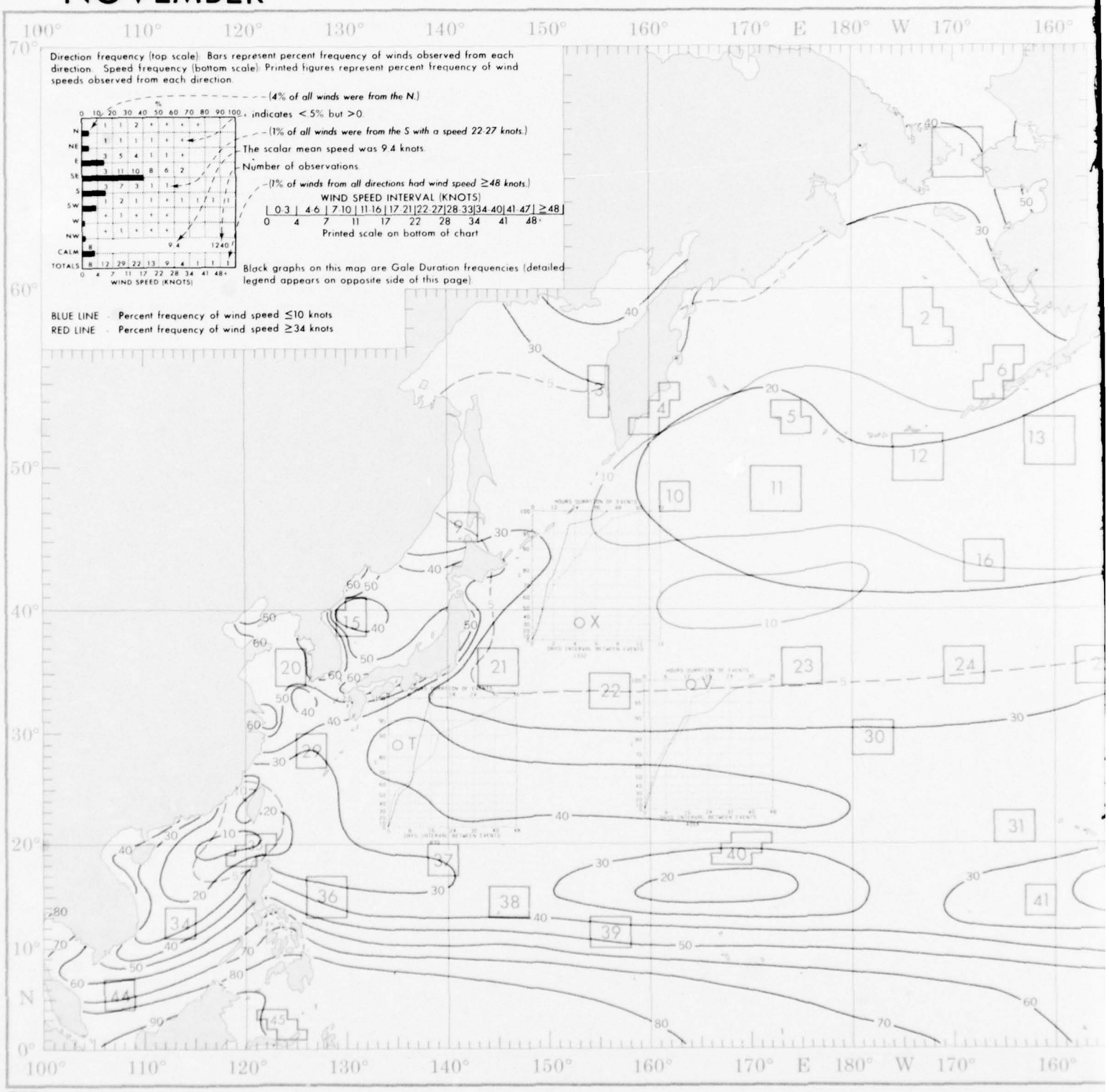
TROPICAL CYCLONE



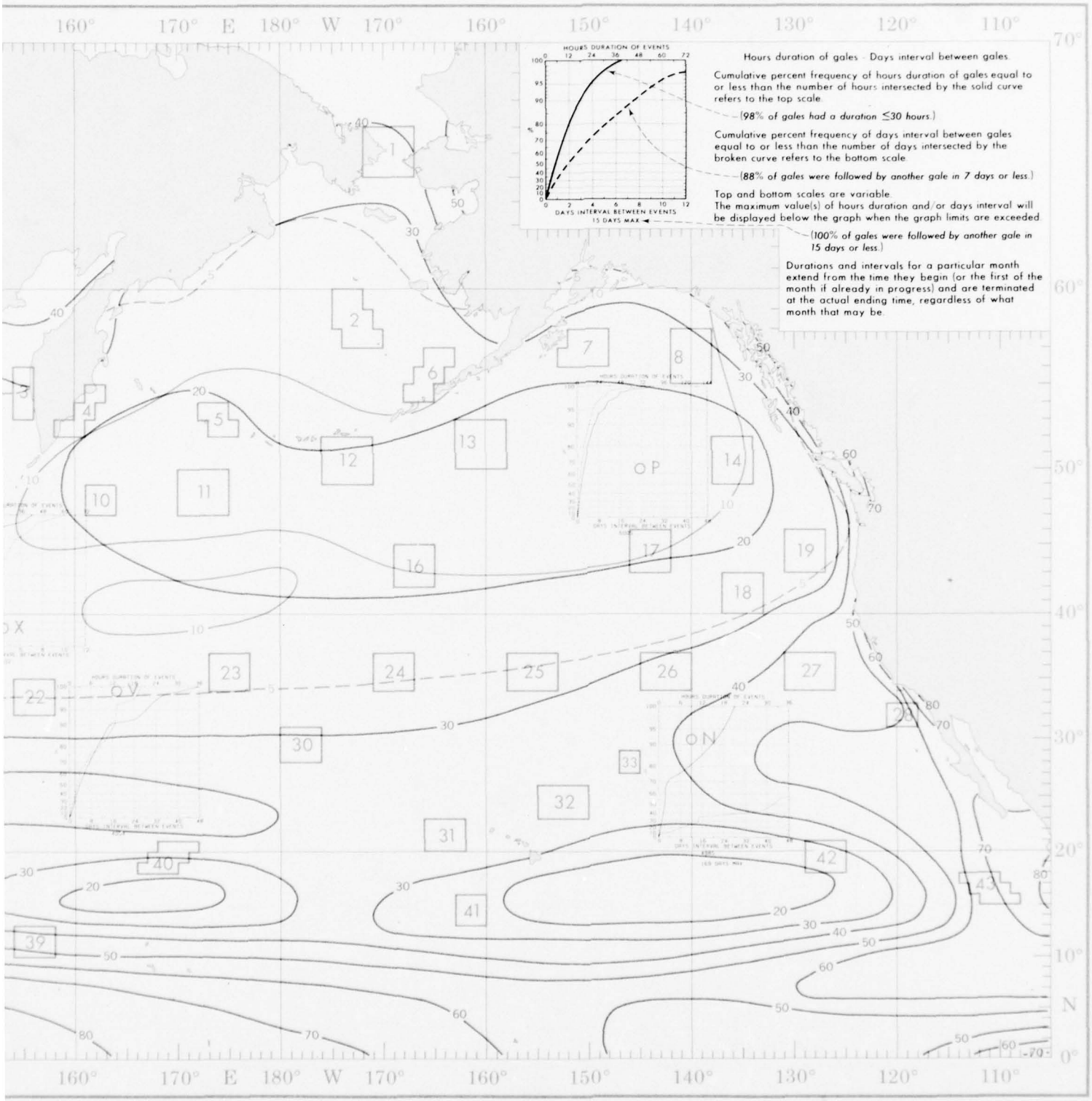
OCTOBER


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed. Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency. Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed. Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.
145° 140° 135° 130° 125° 120° 115° 110° 105° 100° 95° 90° 85° 80°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° N

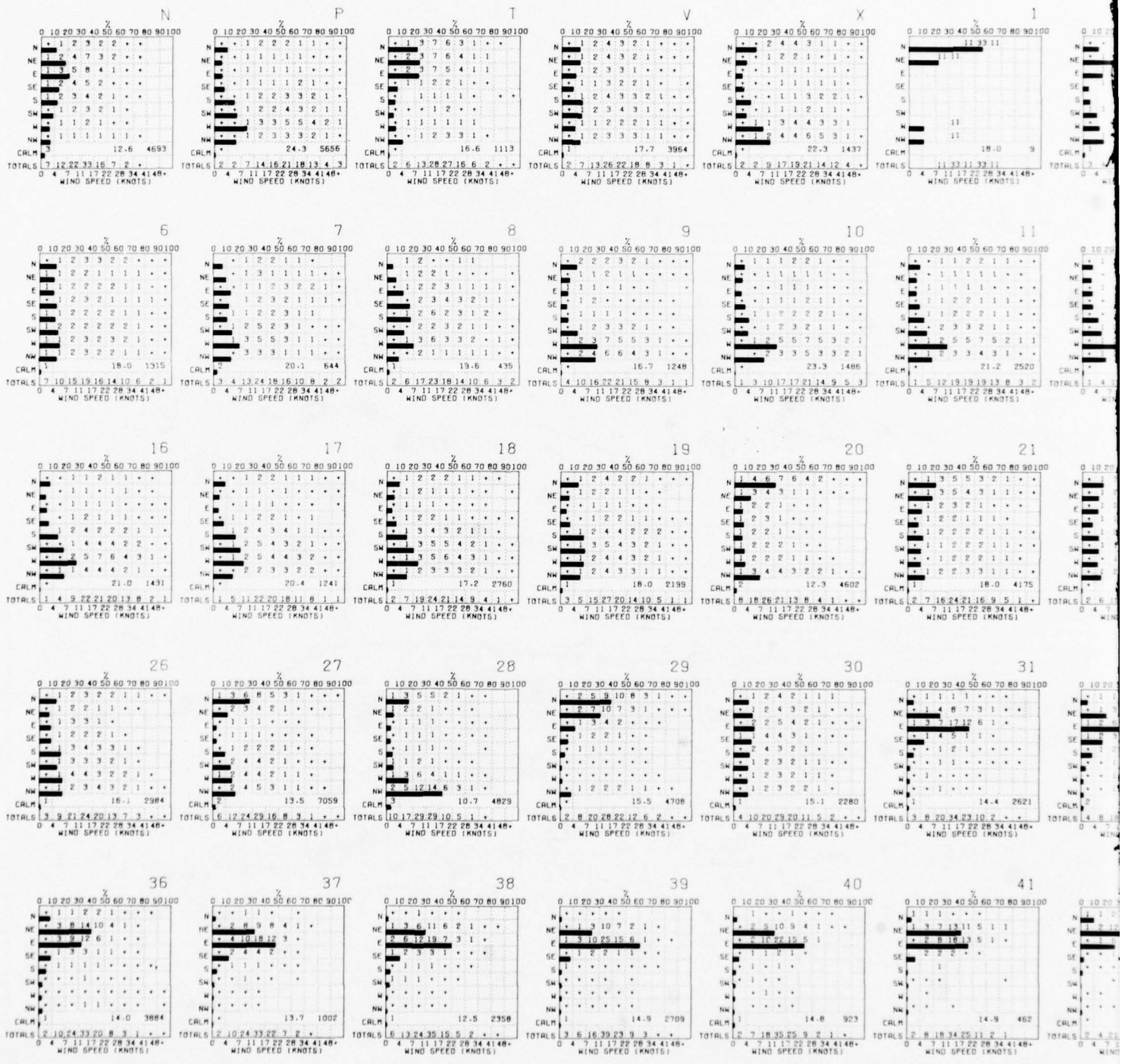
NOVEMBER


Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
indicates < 5% but >0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
WIND SPEED (KNOTS)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

SURFACE WINDS



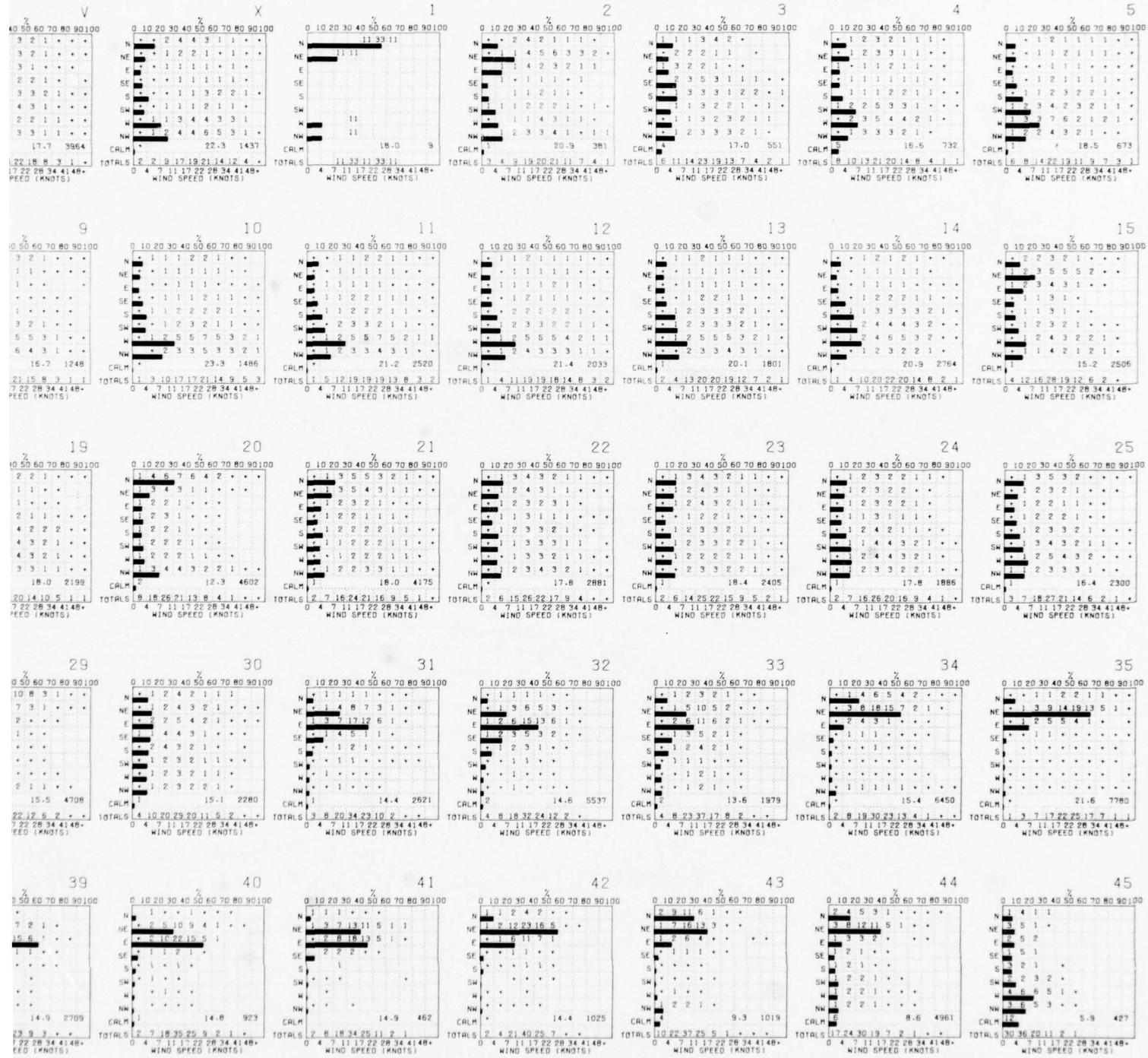
WIND DIRECTION AND SPEED



Graphs represent the objective compilation of available data for specified areas without reg
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

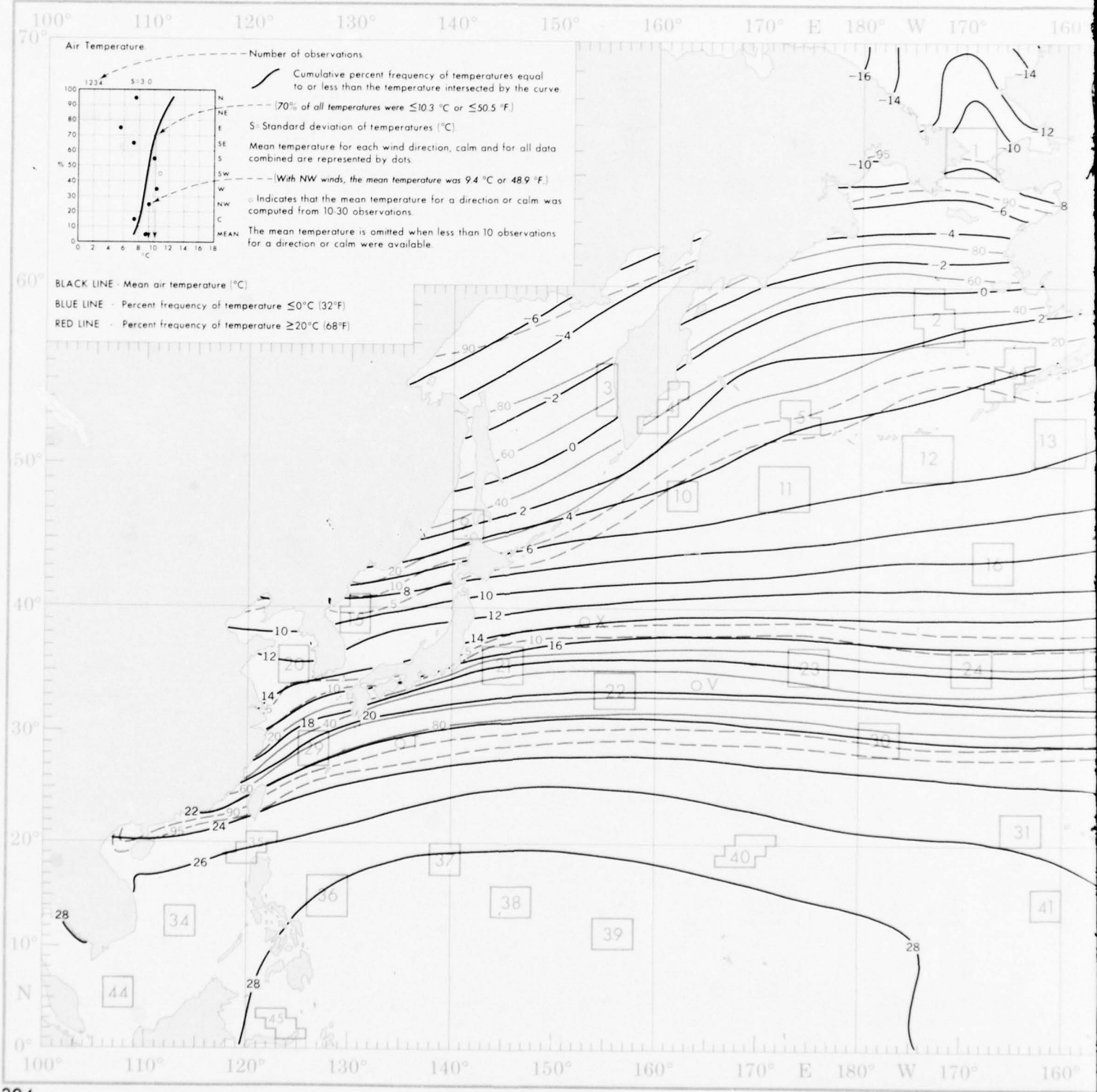
D

NOVEMBER

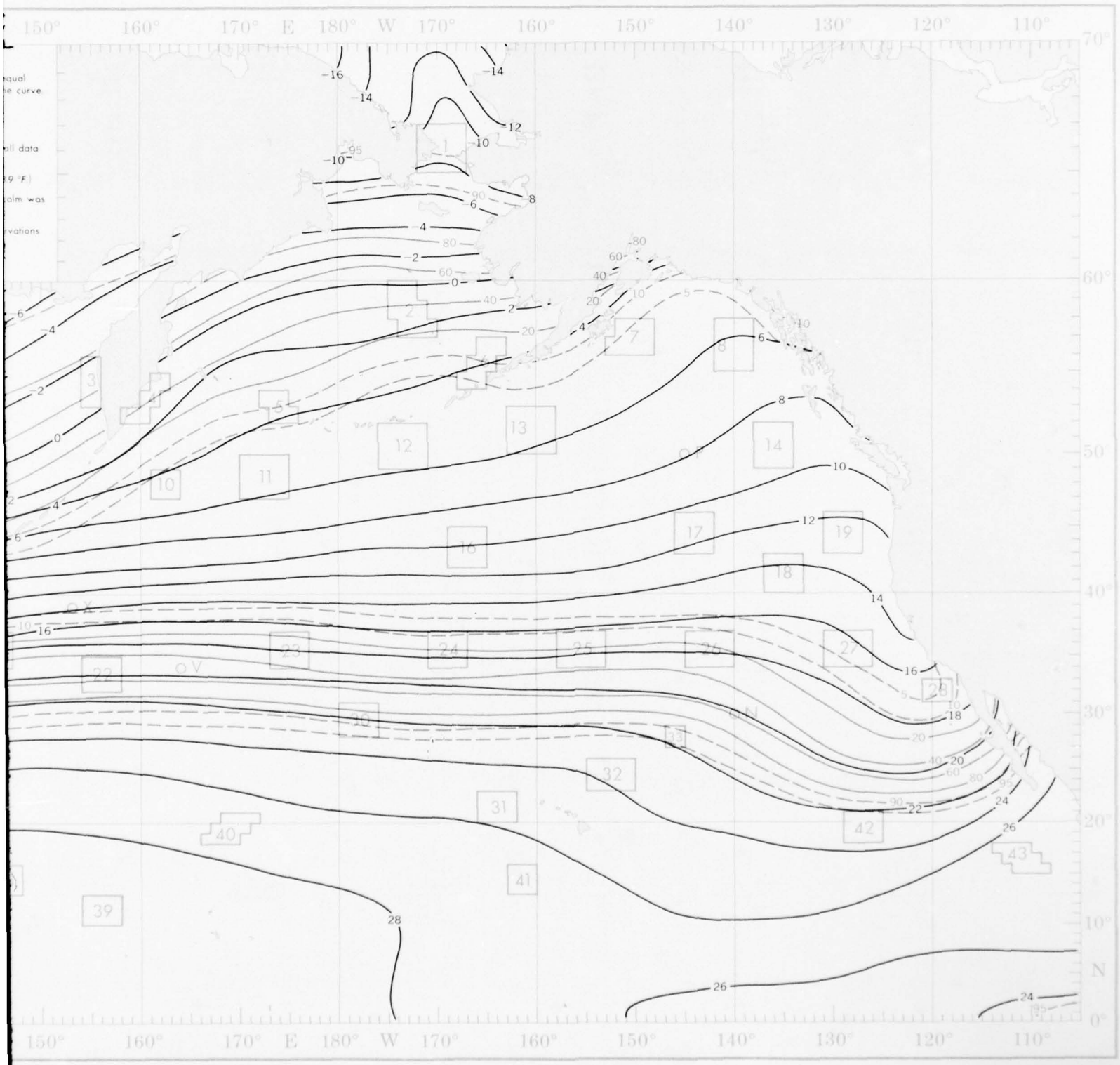


objective compilation of available data for specified areas without regard to suspected biases.
(opposite page) are based on all available data subjectively adjusted where bias was evident.

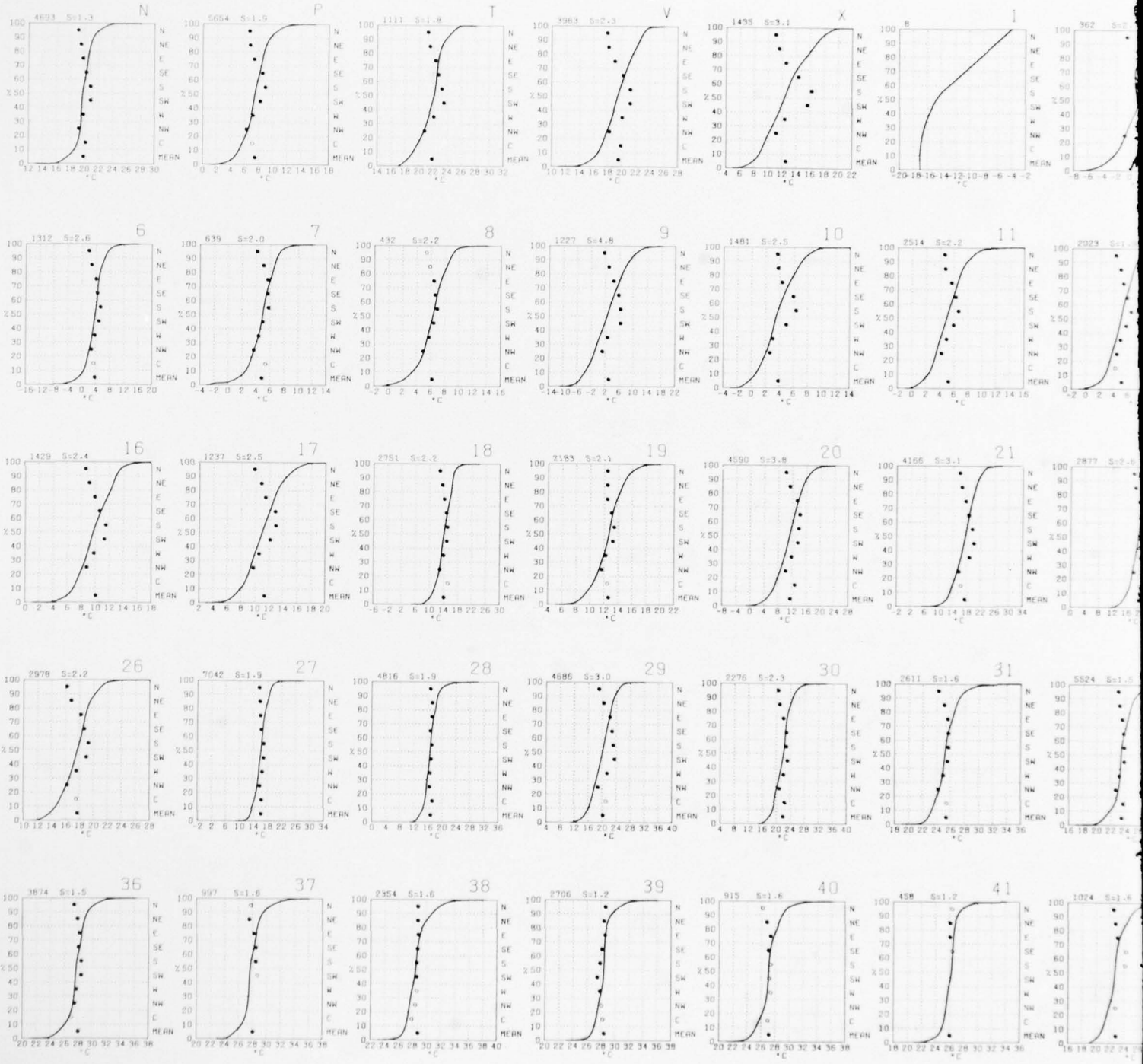
NOVEMBER


Air Temperature
Number of observations
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S = Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
°C
100°
110°
120°
130°
140°
150°
160°
170°
E
180°
W
70°
60°
50°
40°
30°
20°
10°
0°
N

SURFACE AIR TEMPERATURE



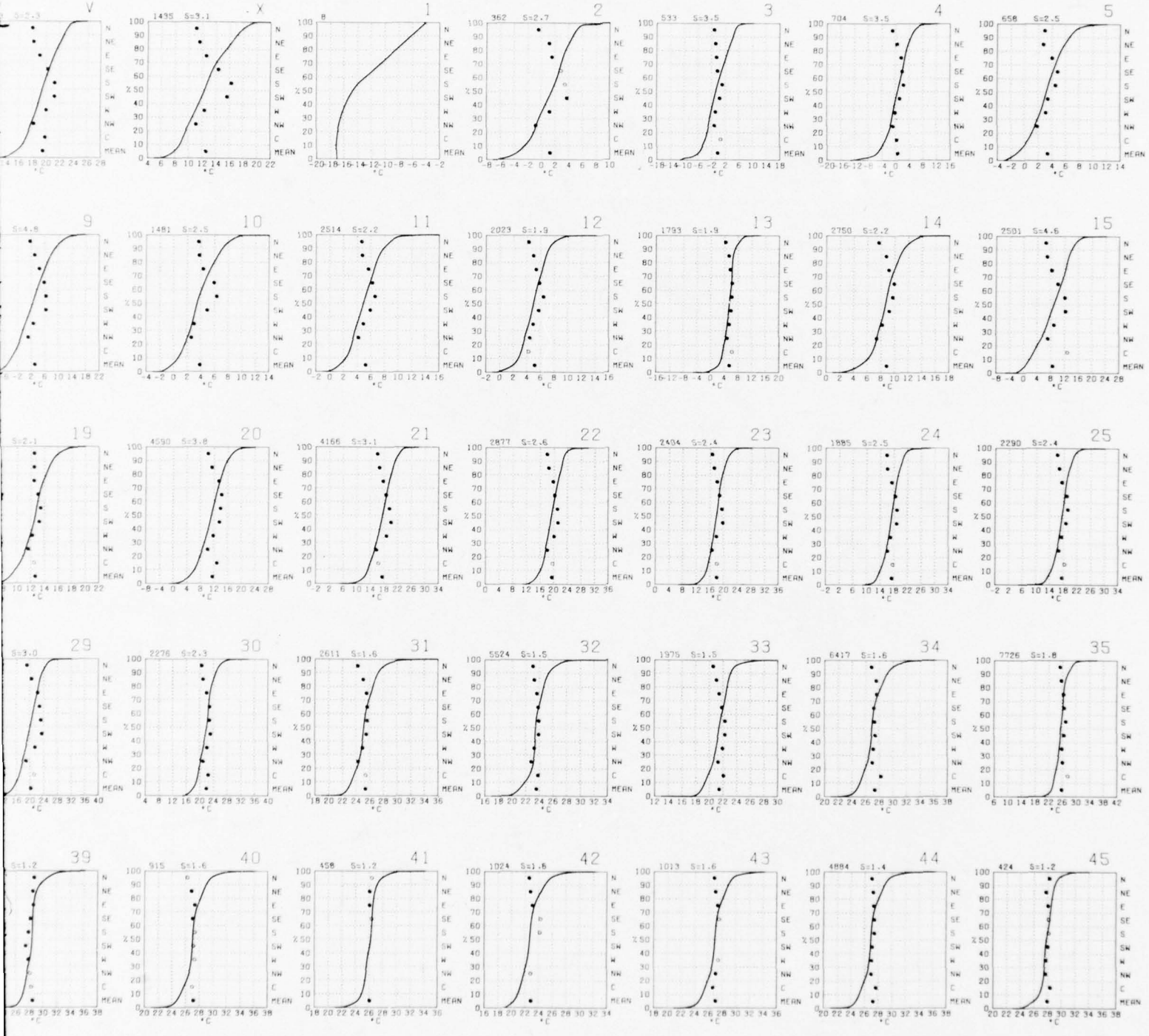
SURFACE AIR TEMPERATURE



Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

E

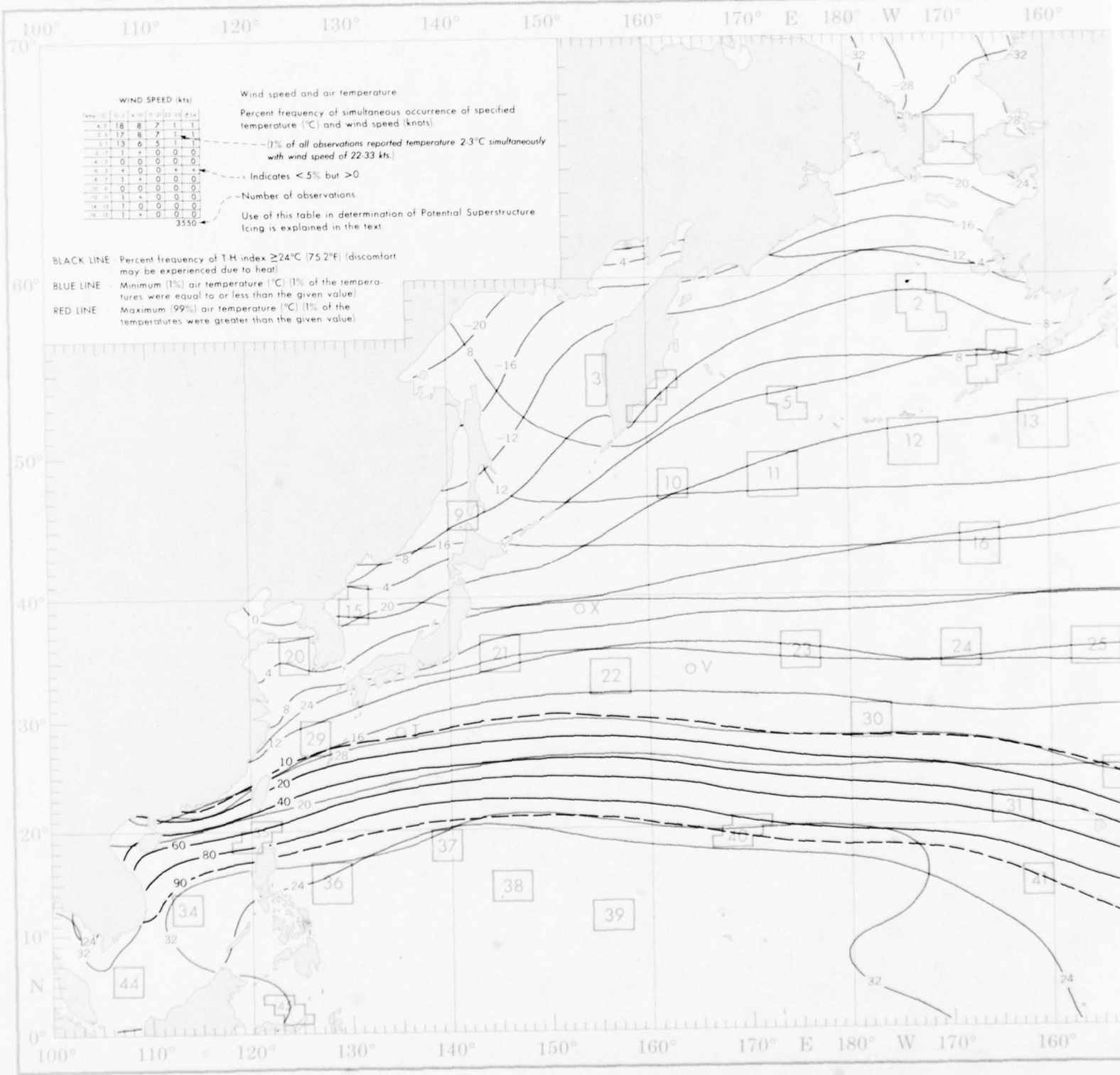
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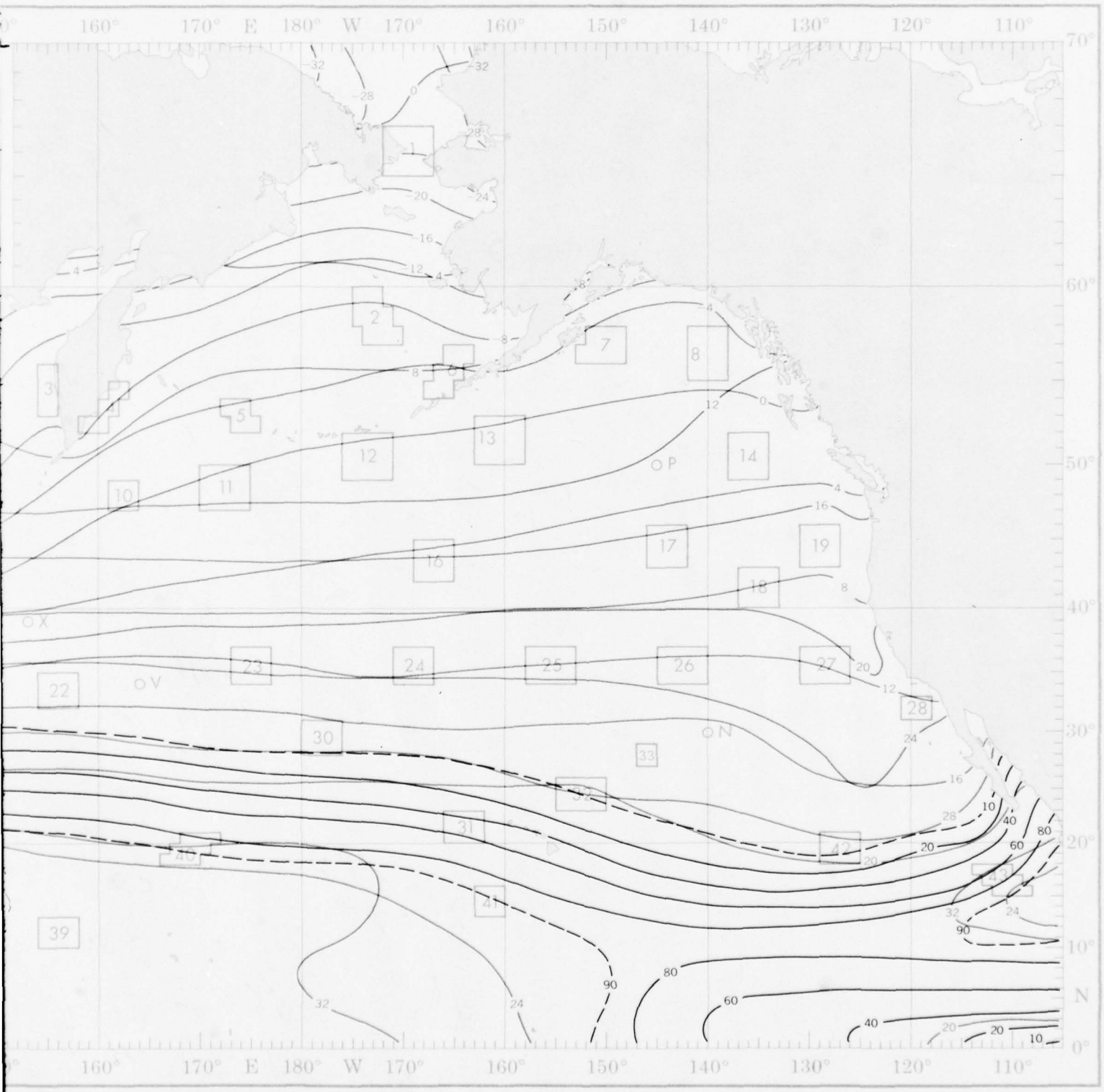
t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER

TEMPERATURE E



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	+	+	+	+	+
22.23	1	4	5	1	0
20.21	3	19	25	3	+
18.19	2	11	18	4	+
16.17	+	1	1	1	+
14.15	+	+	+	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

4693

P

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	0	+	+
12.13	+	+	1	1	+
10.11	+	1	2	5	3
8.9	1	3	12	15	7
6.7	1	4	12	14	7
4.5	+	1	3	3	3
2.3	+	+	+	1	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

5654

T

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	1	0	0
24.25	+	2	8	3	+
22.23	1	10	29	11	1
20.21	+	4	11	5	1
18.19	+	3	5	2	+
16.17	0	+	1	1	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1111

V

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
24.25	+	+	1	1	+
22.23	+	3	10	6	1
20.21	1	5	14	7	1
18.19	1	7	14	7	1
16.17	+	3	8	4	1
14.15	+	1	1	1	+
12.13	0	+	+	+	+
10.11	0	0	0	0	+
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0

3963

X

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	0	+	+
18.19	+	+	1	4	2
16.17	0	1	4	5	3
14.15	1	2	6	4	2
12.13	1	3	10	8	4
10.11	+	3	7	7	2
8.9	+	2	6	5	3
6.7	0	+	1	1	1
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1435

1

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
-10.-9	0	0	0	13	0
-12.-11	0	0	13	0	0
-14.-13	0	0	13	0	0
-16.-15	0	0	13	13	0
-18.-17	0	0	13	25	0
-20.-19	0	0	0	0	0
-22.-21	0	0	0	0	0
-24.-23	0	0	0	0	0
-26.-25	0	0	0	0	0
-28.-27	0	0	0	0	0
-30.-29	0	0	0	0	0

8

WIND S

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0				
6.7	0				
4.5	1				
2.3	1				
0.1	1				
-2.-1	0				
-4.-3	0				
-6.-5	0				
-8.-7	0				
-10.-9	0				
-12.-11	0				

6

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	0
12.13	+	+	+	+	0
10.11	+	+	+	+	0
8.9	1	1	1	+	+
6.7	2	5	6	4	2
4.5	2	9	13	8	4
2.3	2	7	8	6	2
0.1	+	1	3	3	1
-2.-1	0	+	1	1	+
-4.-3	0	+	1	1	+
-6.-5	0	+	+	+	0

1312

7

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	+	+
8.9	+	1	2	3	+
6.7	1	6	15	11	5
4.5	2	7	17	8	3
2.3	0	2	6	3	2
0.1	0	1	1	1	1
-2.-1	0	+	0	+	+
-4.-3	0	+	+	+	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

639

8

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	+	0	0
10.11	0	2	1	+	+
8.9	1	6	10	8	1
6.7	1	7	18	9	6
4.5	0	5	6	5	1
2.3	0	2	3	1	1
0.1	0	+	1	1	+
-2.-1	0	0	+	+	0
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

432

9

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	+	+	0
14.15	+	+	+	+	+
12.13	0	1	2	1	+
10.11	+	2	2	1	+
8.9	+	3	4	1	+
6.7	1	6	4	3	1
4.5	+	4	5	3	1
2.3	1	5	7	3	+
0.1	1	3	7	3	+
≤-1	+	3	11	7	2

1229

10

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	+	+	0
10.11	0	+	+	+	+
8.9	+	1	2	2	1
6.7	0	3	7	7	3
4.5	+	3	10	9	3
2.3	+	5	10	11	6
0.1	0	1	4	4	2
-2.-1	0	0	1	1	1
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1481

11

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	0
12.13	0	+	+	+	0
10.11	+	+	1	1	1
8.9	+	2	5	5	2
6.7	+	6	12	9	4
4.5	+	5	12	9	4
2.3	+	3	6	7	2
0.1	0	+	1	1	+
-2.-1	0	0	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0

2516

WIND SP

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0				
10.11	0				
8.9	0				
6.7	1				
4.5	1				
2.3	+				
0.1	0				
-2.-1	0				
-4.-3	0				
-6.-5	0				
-8.-7	0				

16

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
18.17	0	+	1	+	+
14.15	0	1	2	1	1
12.13	0	2	10	8	3
10.11	+	4	12	8	3
8.9	+	4	11	9	3
6.7	+	2	6	4	1
4.5	0	+	1	1	+
2.5	0	0	0	0	0
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1430

17

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	+	0
16.17	+	1	2	2	1
14.15	+	3	6	4	1
12.13	1	5	13	7	2
10.11	+	5	12	9	3
8.9	0	2	7	6	2
6.7	+	1	2	2	1
4.5	0	+	+	+	+
2.3	0	0	0	0	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1237

18

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	+	+	+	+	0
18.19	+	2	3	1	+
16.17	1	7	12	7	1
14.15	1	8	13	6	1
12.13	1	7	12	6	1
10.11	+	2	4	3	1
8.9	+	+	1	1	+
6.7	+	0	+	+	0
4.5	0	+	0	0	0
2.3	0	0	0	0	0

2753

19

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	+	+	+
16.17	+	2	4	2	1
14.15	1	5	11	6	1
12.13	1	8	21	9	3
10.11	1	4	8	4	2
8.9	+	1	2	2	+
6.7	0	+	+	+	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

2184

20

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	+	0
22.23	0	+	+	+	0
20.21	+	1	+	+	0
18.19	+	2	1	+	0
16.17	1	6	3	+	+
14.15	2	8	5	1	+
12.13	2	10	8	2	+
10.11	1	8	7	2	+
8.9	1	5	5	3	+
6.7	+	3	3	2	+
≤5	+	1	2	2	+

4591

21

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	0	+	+	+	0
24.25	0	+	1	+	+
22.23	+	1	5	3	1
20.21	+	4	8	6	1
18.19	+	6	12	6	1
16.17	1	5	10	5	1
14.15	+	3	6	3	1
12.13	+	2	3	2	1
10.11	0	+	1	1	+
≤9	0	0	+	+	+

4169

WIND SP

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0				
26.27	0				
24.25	+				
22.23	+				
20.21	1				
18.19	1				
16.17	+				
14.15	0				
12.13	0				
10.11	0				
8.9	0				

26

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	0	+	+	0	0
22.23	+	1	1	+	0
20.21	+	5	8	3	+
18.19	2	12	17	6	+
16.17	1	8	12	6	1
14.15	+	2	4	3	1
12.13	+	+	1	1	1
10.11	0	0	+	+	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

2987

27

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	0	+	+	+	0
22.23	+	+	+	+	0
20.21	+	1	1	+	+
18.19	1	8	9	2	+
16.17	2	17	20	5	1
14.15	1	8	11	4	1
12.13	+	2	3	1	+
10.11	+	+	+	+	+
8.9	0	+	+	0	0
6.7	0	0	0	0	0

7043

28

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
28.29	+	0	0	0	0
26.27	+	+	+	0	0
24.25	+	+	+	0	0
22.23	+	1	+	0	0
20.21	1	3	1	+	+
18.19	3	13	9	+	+
16.17	4	21	19	3	+
14.15	1	7	7	2	+
12.13	+	1	1	+	+
10.11	0	+	+	+	0
8.9	0	0	0	0	0

4824

29

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	+	+	+	0	0
28.29	+	+	+	0	0
26.27	+	1	1	+	+
24.25	+	5	5	1	+
22.23	1	7	12	3	+
20.21	+	7	13	4	+
18.19	+	5	11	4	1
16.17	+	3	7	4	1
14.15	+	1	2	1	+
≤13	+	+	+	+	+

4686

30

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	+	+	+	+	0
26.27	1	3	2	+	0
24.25	1	6	9	2	+
22.23	1	10	18	6	1
20.21	1	7	13	4	+
18.19	+	3	5	3	1
16.17	0	+	1	1	+
14.15	0	+	+	0	0
12.13	0	0	0	0	0

2276

31

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.36	+	+	+	0	0
32.33	+	+	+	0	0
30.31	+	+	1	+	0
28.29	+	2	5	+	0
26.27	1	11	22	5	0
24.25	2	11	24	6	+
22.23	+	2	5	1	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2613

WIND SP

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+				
30.31	0				
28.29	+				
26.27	1				
24.25	2				
22.23	2				
20.21	+				
18.19	1				
16.17	0				
14.15	0				
12.13	0				

36

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	+	1	1	+	0
30.31	+	4	5	1	0
28.29	1	20	28	5	+
26.27	1	8	17	4	1
24.25	+	+	1	+	+
22.23	0	+	+	0	+
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

3876

37

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	+	+	0	0
32.33	+	1	1	0	0
30.31	+	4	6	1	0
28.29	1	16	30	3	0
26.27	1	12	16	4	+
24.25	+	+	1	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

998

38

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
36.38	0	0	+	0	0
36.37	0	0	+	0	0
34.35	+	+	+	0	0
32.33	1	2	2	0	0
30.31	2	7	6	+	0
28.29	3	21	33	5	+
26.27	1	6	7	2	+
24.25	+	+	+	+	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0

2356

39

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.36	+	+	+	0	0
32.33	+	1	1	+	0
30.31	+	3	7	1	0
28.29	2	14	47	10	+
26.27	+	3	7	2	+
24.25	+	+	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2706

40

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
34.36	0	0	+	+	0
32.33	0	+	1	0	0
30.31	+	2	4	+	0
28.29	1	10	18	2	0
26.27	1	12	32	7	+
24.25	+	2	4	1	+
22.23	0	+	1	+	+
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

915

41

TEMP (°C)	WIND SPEED (KTS) 0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	1	+	0	0
28.29	+	3	4	1	+
26.27	1	17	42	9	1
24.25	1	5	11	3	+
22.23	0	0	+	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

459

WIND SP

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0				
28.29	0				
26.27	0				
24.25	+				
22.23	1				
20.21	+				
18.19	0				
16.17	0				
14.15	0				
12.13	0				
10.11	0				

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wh

PERATURE

NOVEMBER

WIND SPEED (KTS) V

ND SPEED (KTS) V					
0-3	4-10	11-21	22-33	≥ 34	
+	+	1	1	+	
+	3	10	6	1	
1	5	14	7	1	
1	7	14	7	1	
+	3	8	4	1	
+	1	1	1	+	
0	+	+	+	+	
0	0	0	0	+	
0	0	0	0	0	
0	0	0	0	0	

3963

WIND SPEED (KTS) X

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	0	0	+	+
18.19	+	+	1	4	2
16.17	0	1	4	5	3
14.15	1	2	6	4	2
12.13	1	3	10	8	4
10.11	+	3	7	7	2
8.9	+	2	6	5	3
6.7	0	+	1	1	1
4.5	0	0	0	0	0
2.3	0	0	0	0	0
0.1	0	0	0	0	0

1435

WIND SPEED (KTS) 1

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
-10.-9	0	0	0	13	0
-12.-11	0	0	13	0	0
-14.-13	0	0	13	0	0
-16.-15	0	0	13	13	0
-18.-17	0	0	13	25	0
-20.-19	0	0	0	0	0
-22.-21	0	0	0	0	0
-24.-23	0	0	0	0	0
-26.-25	0	0	0	0	0
-28.-27	0	0	0	0	0
-30.-29	0	0	0	0	0

8

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
8.9	0	0	+	+	+
6.7	0	0	1	1	1
4.5	1	4	10	6	1
2.3	1	3	10	8	2
0.1	1	3	7	7	4
-2.-1	0	2	7	6	3
-4.-3	0	1	4	2	2
-6.-5	0	1	1	1	0
-8.-7	0	0	0	+	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0

362

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	0
8.9	0	+	+	0	0
6.7	+	2	1	+	+
4.5	2	4	5	3	2
2.3	+	3	6	4	1
0.1	1	4	7	3	1
-2.-1	2	4	11	6	2
-4.-3	+	3	8	3	1
-6.-5	+	2	3	2	0
-8.-7	0	2	0	+	0
≤-9	+	1	1	0	0

533

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	0
8.9	0	+	1	+	+
6.7	+	2	1	1	+
4.5	1	3	7	4	1
2.3	2	3	10	5	2
0.1	2	5	9	7	1
-2.-1	2	5	6	3	1
-4.-3	+	3	5	1	+
-6.-5	+	2	1	1	+
-8.-7	+	1	1	+	0
≤-9	+	1	1	0	0

704

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	+	0	0	0	0
10.11	0	0	+	0	+
8.9	1	+	1	1	+
6.7	2	4	6	4	2
4.5	1	5	13	4	4
2.3	1	7	11	7	3
0.1	+	5	5	2	+
-2.-1	+	1	4	1	1
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

658

WIND SPEED (KTS) 9

ND SPEED (KTS) 9					
0-3	4-10	11-21	22-33	≥ 34	
0	+	+	+	0	
0	+	+	+	0	
+	+	+	+	+	
0	1	2	1	+	
+	2	2	1	+	
+	3	4	1	+	
1	6	4	3	1	
+	4	5	3	1	
1	5	7	3	+	
1	3	7	3	+	
+	3	11	7	2	

1229

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	+	+	0
10.11	0	+	+	+	+
8.9	+	1	2	2	1
6.7	0	3	7	7	3
4.5	+	3	10	9	3
2.3	+	5	10	11	6
0.1	0	1	4	4	2
-2.-1	0	0	1	1	1
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1481

WIND SPEED (KTS) 11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	0	+	0	0
12.13	0	+	+	+	0
10.11	+	+	1	1	1
8.9	0	1	4	4	2
6.7	1	6	15	11	5
4.5	1	6	12	12	4
2.3	+	2	5	5	2
0.1	0	+	1	+	1
-2.-1	0	+	1	1	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

2516

WIND SPEED (KTS) 12

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	+	0
10.11	0	+	+	+	+
8.9	0	1	4	4	2
6.7	1	6	15	11	5
4.5	1	6	12	12	4
2.3	+	2	5	5	2
0.1	0	+	1	+	1
-2.-1	0	+	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

2023

WIND SPEED (KTS) 13

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	+	0	+	0
10.11	0	+	1	+	0
8.9	0	+	2	1	+
6.7	1	7	19	15	5
4.5	1	5	10	9	4
2.3	0	1	3	3	1
0.1	0	+	1	1	+
-2.-1	0	0	+	+	0
-4.-3	0	0	+	+	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1793

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	+	0	0
16.17	0	0	+	+	0
14.15	0	+	1	+	+
12.13	+	2	4	4	1
10.11	+	4	11	8	3
8.9	+	6	17	13	4
6.7	+	2	7	7	2
4.5	+	+	2	2	1
2.3	+	+	1	1	+
0.1	0	0	0	+	0
-2.-1	0	0	0	0	0

2750

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	0	+	0	0
22.23	0	+	+	+	0
20.21	+	+	+	0	0
18.19	+	+	+	+	0
16.17	+	2	2	+	+
14.15	+	2	7	+	+
12.13	1	6	10	1	+
10.11	1	5	6	2	+
8.9	1	4	4	2	1
6.7	+	3	6	4	1
≤5	+	4	12	8	+

2501

WIND SPEED (KTS) 19

ND SPEED (KTS) 19					
0-3	4-10	11-21	22-33	≥ 34	
0	+	+	+	+	
+	2	4	2	1	
1	5	11	6	1	
1	8	21	9	3	
1	4	8	4	2	
+	1	2	2	+	
0	+	+	+	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	

2184

WIND SPEED (KTS) 20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	0	+	+	+	0
20.21	+	1	+	+	0
18.19	+	2	1	+	0
16.17	1	6	3	+	+
14.15	2	8	5	1	+
12.13	2	10	8	2	+
10.11	1	8	7	2	+
8.9	1	5	5	3	+
6.7	+	3	3	2	+
≤5	+	1	2	2	+

4591

WIND SPEED (KTS) 21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	0	0
26.27	0	+	+	+	0
24.25	0	+	1	+	+
22.23	+	1	5	3	1
20.21	+	4	8	6	1
18.19	+	6	12	6	1
16.17	1	5	10	5	1
14.15	+	3	6	3	1
12.13	+	2	3	2	1
10.11	0	+	1	1	+
≤9	0	0	+	+	+

4169

WIND SPEED (KTS) 22

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	0	+	+	0
26.27	0	+	+	+	0
24.25	+	1	2	1	+
22.23	+	3	11	6	1
20.21	1	5	13	7	1
18.19	1	6	13	6	1
16.17	+	3	7	4	1
14.15	0	1	2	1	+
12.13	0	+	+	+	+
10.11	0	0	0	0	+
8.9	0	0	0	0	0

2877

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	0	0	+	+	+
22.23	+	2	3	2	1
20.21	+	3	9	5	1
18.19	1	7	19	6	1
16.17	1	6	12	7	2
14.15	+	2	4	3	1
12.13	+	+	1	1	1
10.11	0	+	0	+	+
8.9	0	0	+	0	0
6.7	0	0	+	0	0

2405

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	+	0	0
24.25	0	0	+	+	+
22.23	0	1	2	1	0
20.21	+	3	8	4	1
18.19	1	8	14	7	1
16.17	1	8	13	8	1
14.15	+	2	5	3	1
12.13	0	1	2	1	1
10.11	0	+	+	+	+
8.9	0	0	+	0	0
6.7	0	0	0	0	0

1885

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	0	0	0
26.27	+	+	0	+	0
24.25	+	+	+	+	+
22.23	+	1	2	1	+
20.21	+	4	9	4	+
18.19	1	9	16	6	1
16.17	1	8	13	5	1
14.15	+	2	5	3	1
12.13	+	1	1	1	1
10.11	0	+	+	+	+
≤9	0	+	+	0	0

2291

WIND SPEED (KTS) 29

ND SPEED (KTS) 29					
0-3	4-10	11-21	22-33	≥ 34	
0	+	0	0	0	
+	+	+	0	0	
+	+	+	0	0	
+	1	1	+	+	
+	5	5	1	+	
1	7	12	3	+	
+	7	13	4	+	
+	5	11	4	1	
+	3	7	4	1	
+	1	2	1	+	
+	+	+	+	+	

4686

WIND SPEED (KTS) 30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	0	+	+	0	0
28.29	+	+	+	+	0
26.27	1	3	2	+	0
24.25	1	6	9	2	+
22.23	1	10	18	6	1
20.21	1	7	13	4	+
18.19	+	3	5	3	1
16.17	0	+	1	1	+
14.15	0	+	+	0	0
12.13	0	0	0	0	0

2276

WIND SPEED (KTS) 31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	+	0	0
32.33	+	+	+	0	0
30.31	+	+	1	+	0
28.29	+	2	5	+	0
26.27	1	11	22	5	0
24.25	2	11	24	6	+
22.23	+	2	5	1	+
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2613

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	0	+	+	0	0
28.29	+	+	1	+	0
26.27	1	3	6	1	+
24.25	2	10	22	5	+
22.23	2	12	24	6	+
20.21	+	2	3	1	+
18.19	+	+	+	+	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

5524

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
28.29	0	+	+	0	0
26.27	+	1	1	0	0
24.25	+	2	3	1	0
22.23	2	13	24	4	+
20.21	1	13	21	4	+
18.19	+	2	5	1	+
16.17	0	+	+	0	0
14.15	0	+	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0

1975

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	0	+	+	0	0
32.33	+	+	1	+	0
30.31	+	2	4	+	0
28.29	1	11	20	4	+
26.27	1	12	23	9	1
24.25	+	1	4	2	+
22.23	0	+	+	+	+
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

6423

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	+	0
32.33	+	+	+	+	0
30.31	+	1	1	+	+
28.29	+	3	8	4	+
26.27	+	5	19	18	3
24.25	+	2	10	15	3
22.23	+	+	2	4	1
20.21	0	0	+	+	+
18.19	+	0	0	+	+
16.17	0	+	+	0	0
14.15	0	0	0	0	0

7728

WIND SPEED (KTS) 39

ID SPEED (KTS) 39					
-3	4-10	11-21	22-33	≥ 34	
+	+	+	0	0	
+	1	1	+	0	
+	3	7	1	0	
2	14	47	10	+	
+	3	7	2	+	
0	+	+	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	
0	0	0	0	0	

2706

WIND SPEED (KTS) 40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	+	0
32.33	0	+	1	0	0
30.31	+	2	4	+	0
28.29	1	10	18	2	0
26.27	1	12	32	7	+
24.25	+	2	4	1	+
22.23	0	+	1	+	+
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

915

WIND SPEED (KTS) 41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	0	+	0	0
30.31	0	1	+	0	0
28.29	+	3	4	1	+
26.27	1	17	42	9	1
24.25	1	5	11	3	+
22.23	0	0	+	1	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

459

WIND SPEED (KTS) 42

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	+	1	0	0
26.27	0	1	4	1	0
24.25	+	6	16	2	0
22.23	1	14	36	4	+
20.21	+	3	9	1	+
18.19	0	+	1	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1025

WIND SPEED (KTS) 43

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	1	1	0	0
30.31	+	3	1	0	0
28.29	3	17	9	0	0
26.27	5	32	16	1	+
24.25	1	5	3	+	+
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

1016

WIND SPEED (KTS) 44

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.36	+	+	0	0	0
32.33	+	1	+	0	0
30.31	1	3	1	+	0
28.29	7	18	8	+	0
26.27	8	28	15	2	+
24.25	+	3	2	-	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

4918

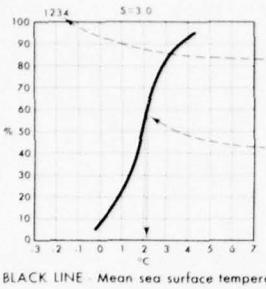
WIND SPEED (KTS) 45

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	0	0	0
30.31	4	4	1	0	0
28.29	20	36	7	0	0
26.27	6	14	4	1	0
24.25		1	1	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

427

the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER



Sea surface temperature

Number of observations.

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

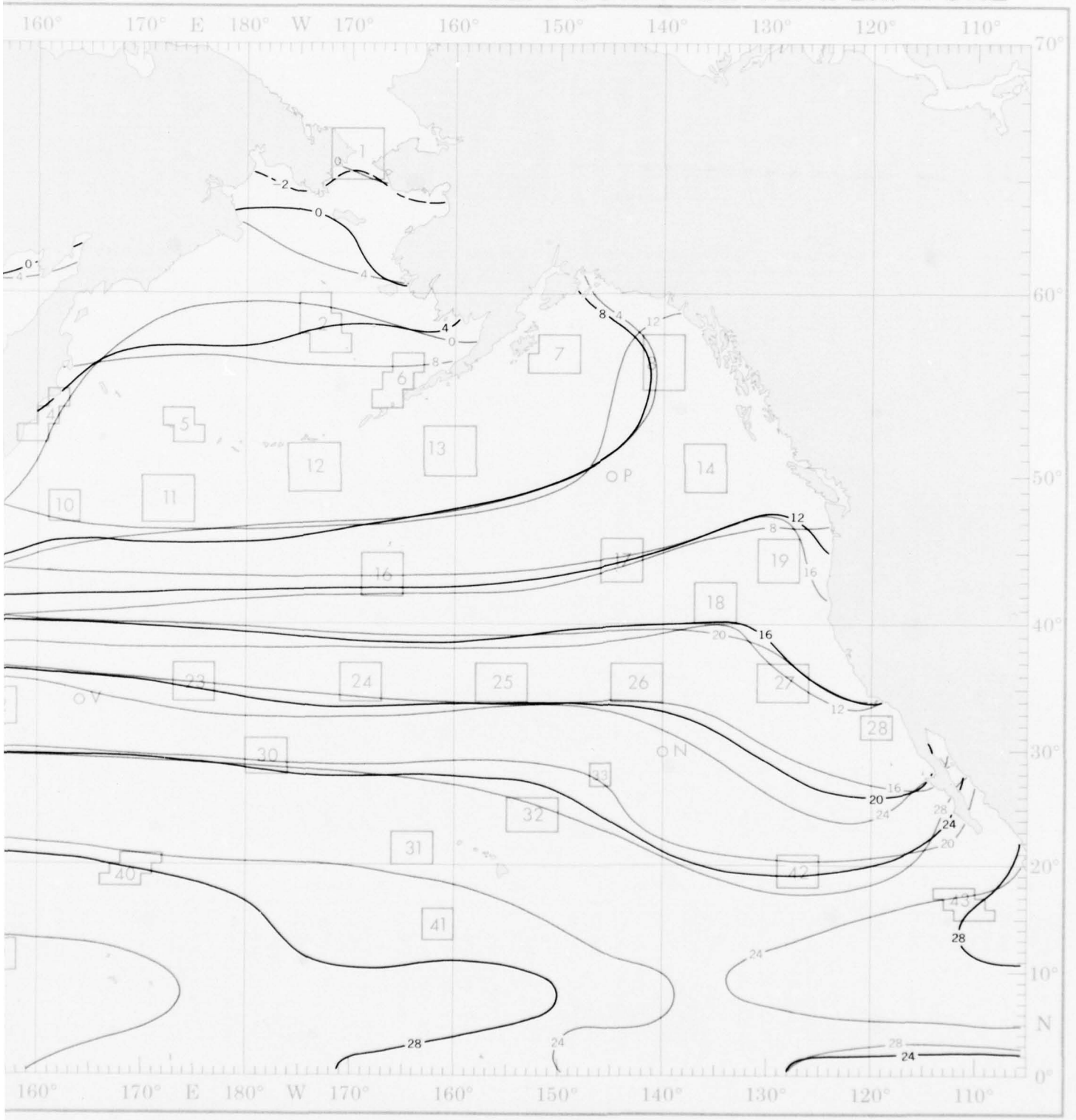
S = Standard deviation of sea surface temperatures (°C).

BLACK LINE - Mean sea surface temperature (°C).

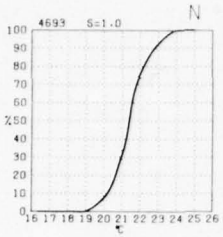
BLUE LINE - Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value).

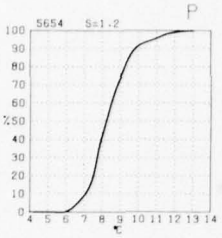
RED LINE - Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value).

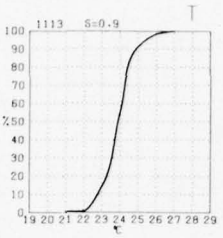
SEA SURFACE TEMPERATURE

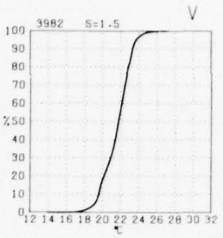


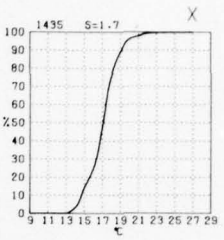
SEA SURFACE TEMPERATURE



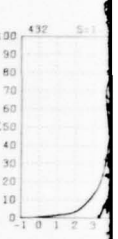


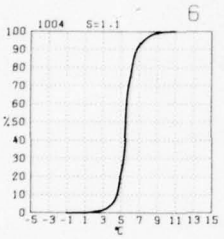


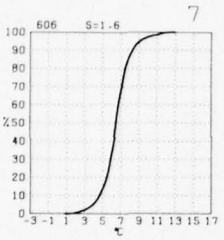


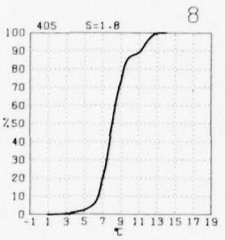


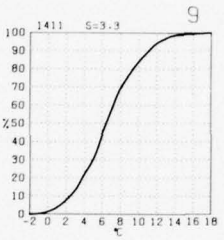
INSUFFICIENT DATA

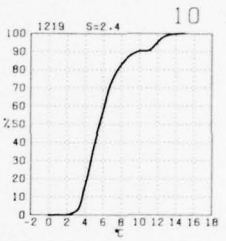


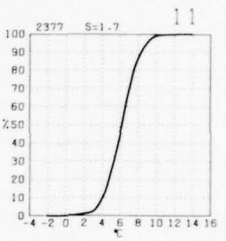


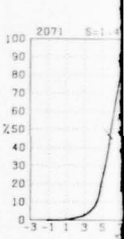


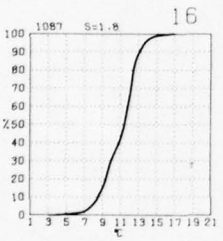


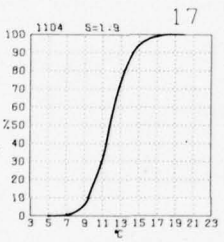


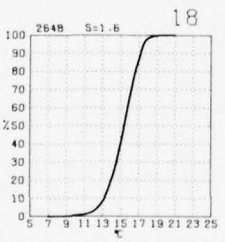


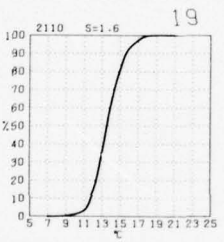


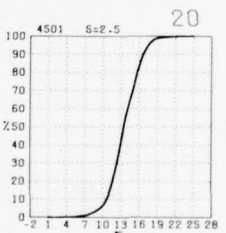


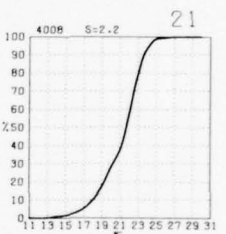


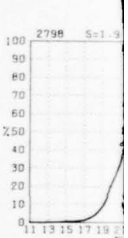


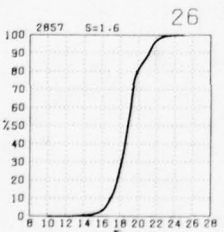


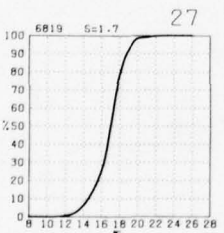


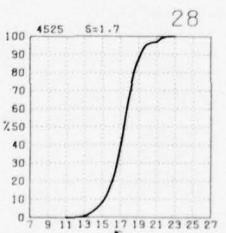


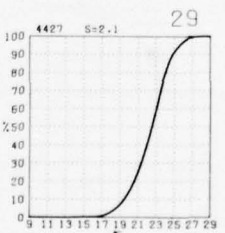


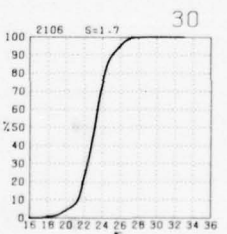


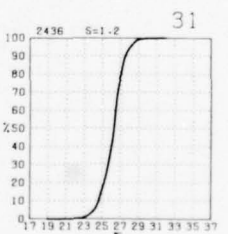


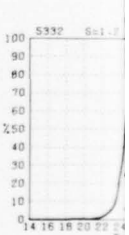


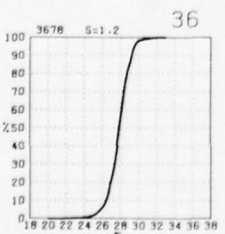


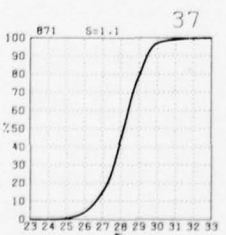


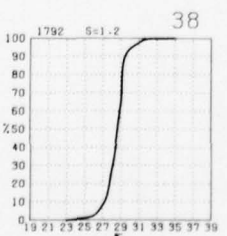


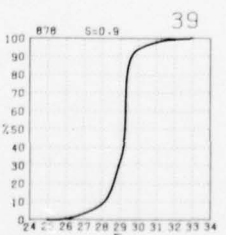


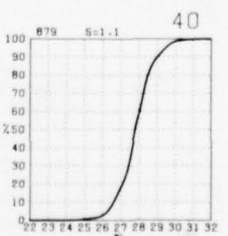


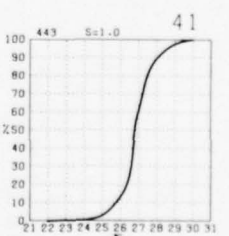


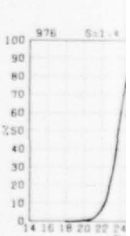






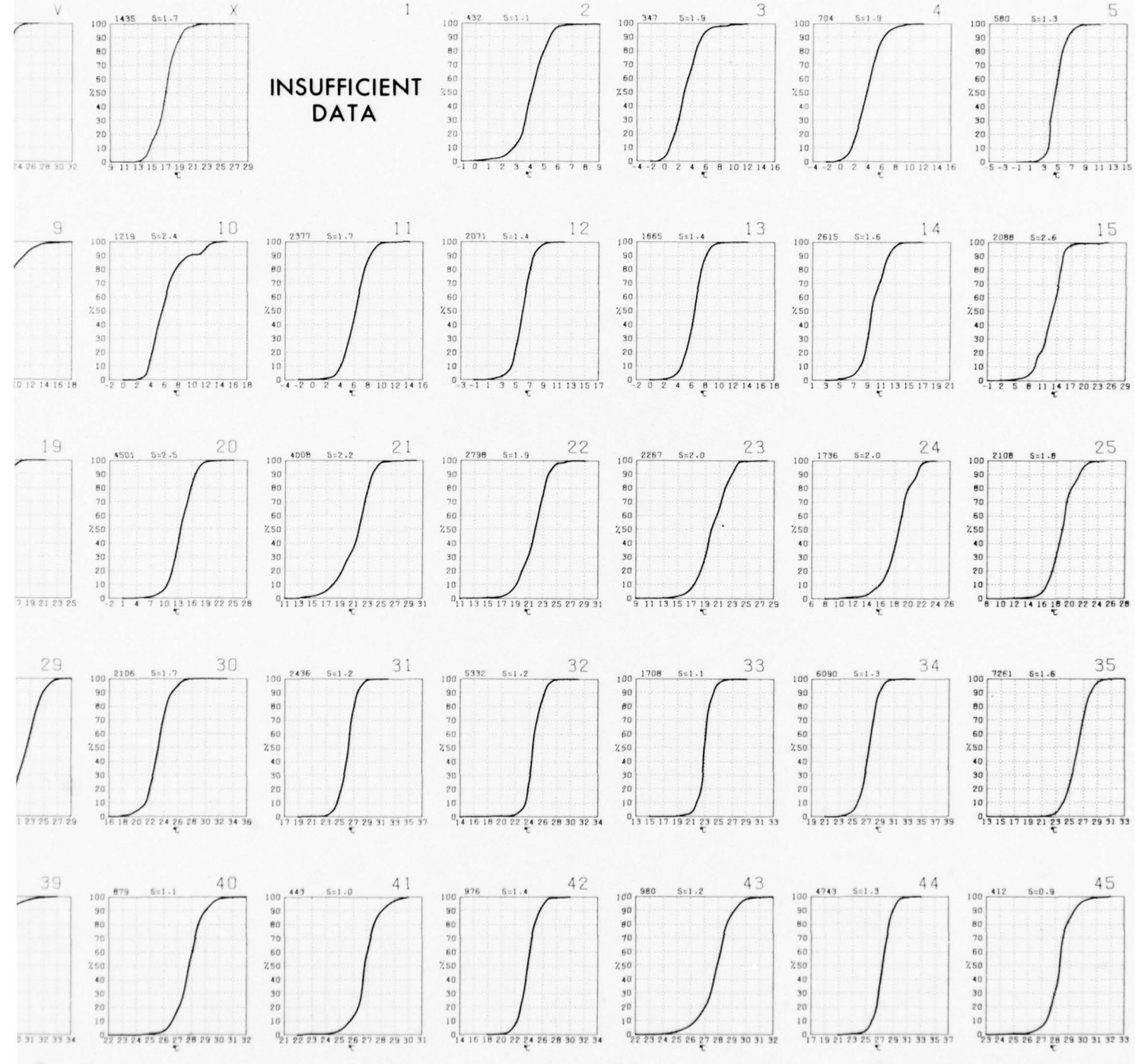






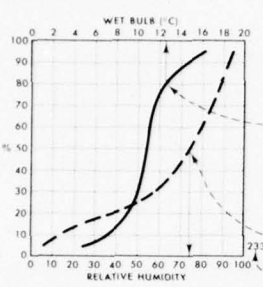
Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

NOVEMBER



bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER



Wet bulb - Relative humidity.

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C).

(*80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.*)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%).

(*50% of all observed relative humidities were ≤74%.*)

Number of observations.

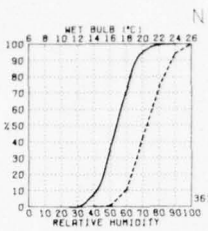
BLUE LINE - Minimum (1%) dew-point temperature (°C) (1% of the computed values were equal to or less than the given value)

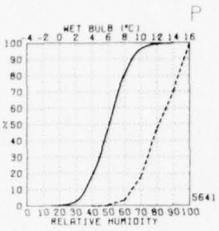
RED LINE - Maximum (99%) dew-point temperature (°C) (1% of the computed values were greater than the given value)

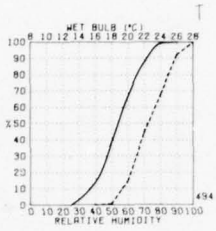
HUMIDITY

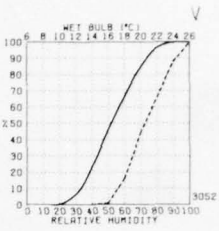

160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° N 0°
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
O P O X O V O N
36 4 36 32 28 32 0 24 20 16 4 12 8 8 4 12 0 16 4 20 8 24 12 16 28 20 28

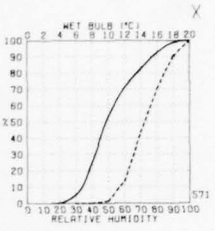
WET BULB AND RELATIVE HUMIDITY



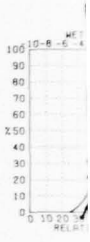


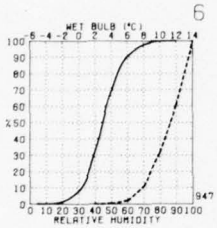


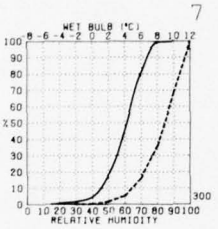


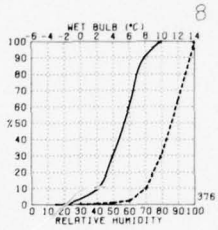


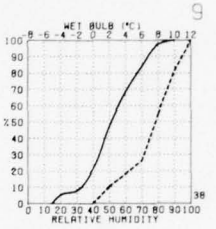
INSUFFICIENT DATA

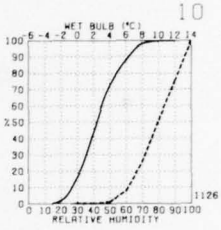


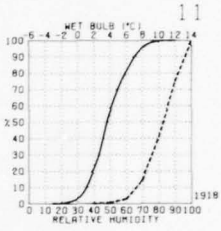


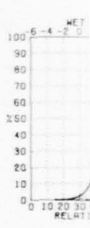


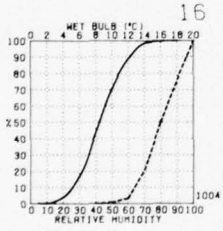


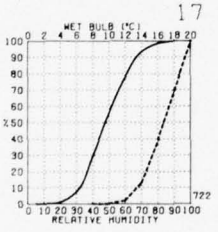


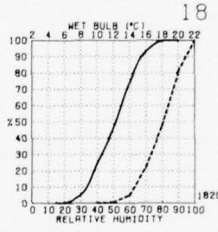


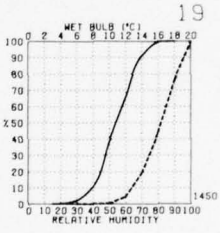


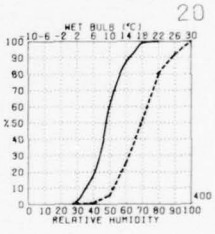


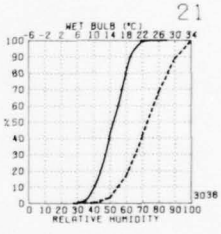


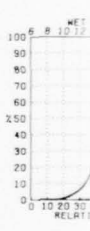


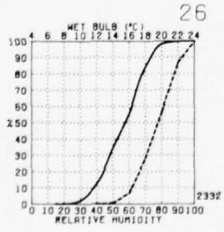


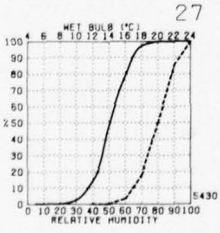


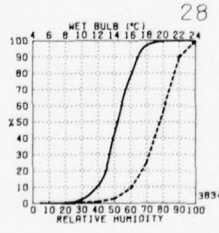


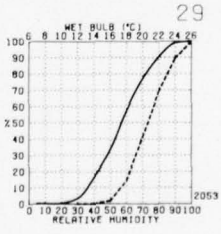


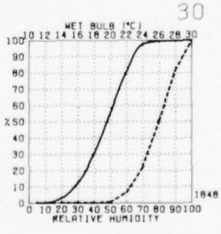


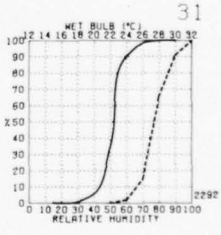


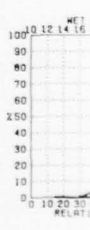


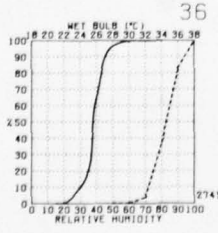


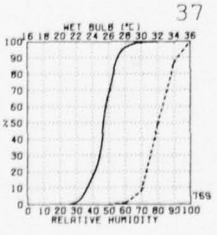


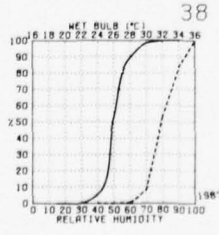


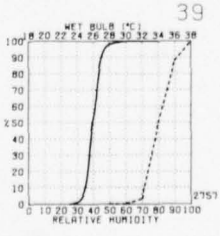


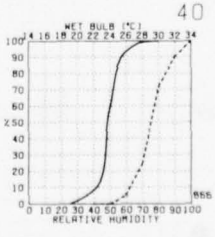


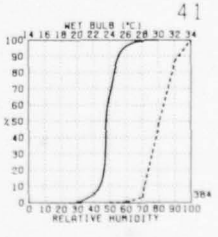


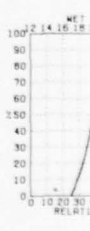








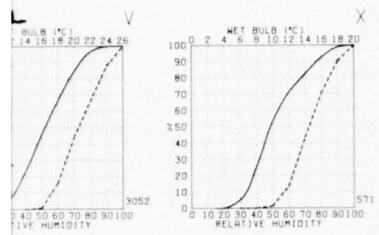




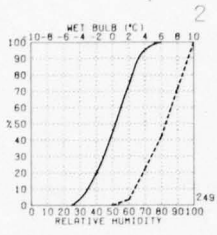
Graphs represent the objective compilation of available data for specified areas without reg
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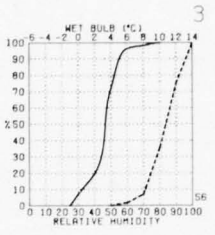
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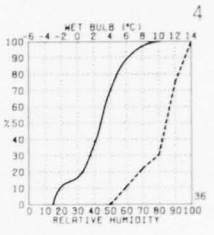
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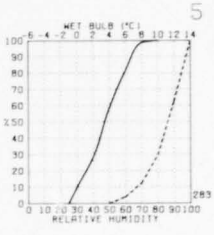


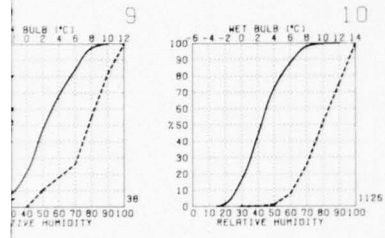
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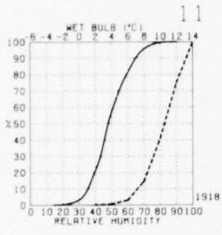


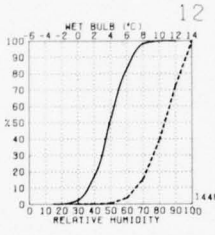


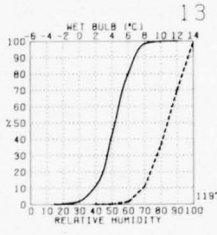


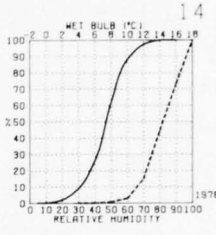


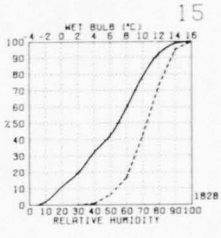


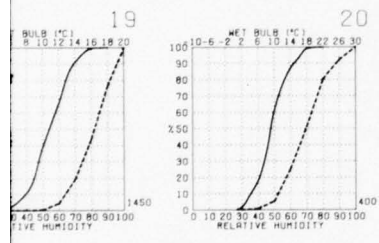


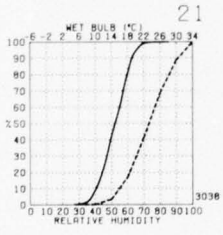


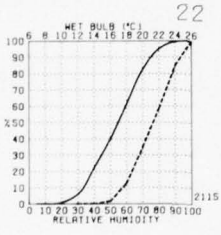


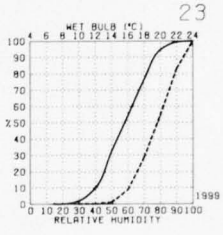


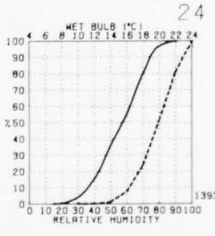


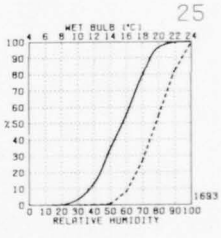


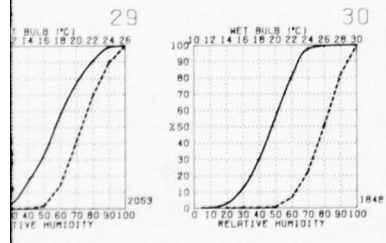


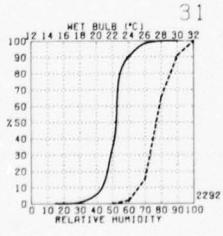


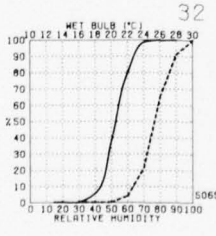


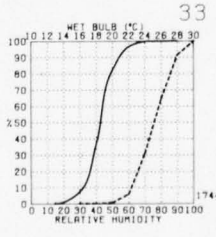


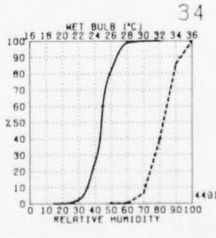


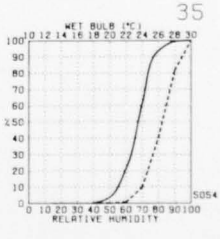


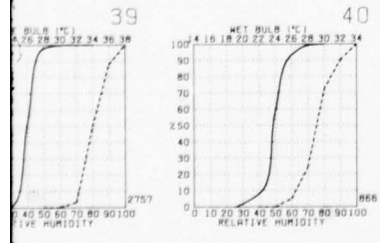


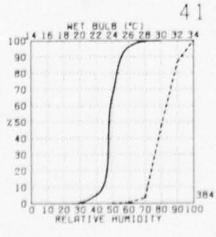


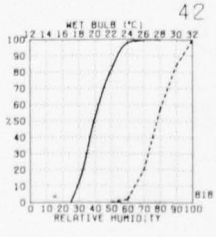


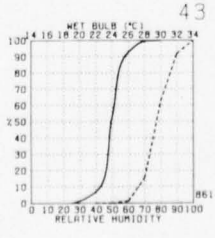


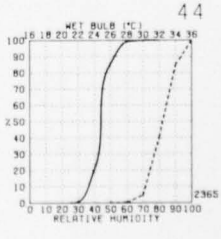


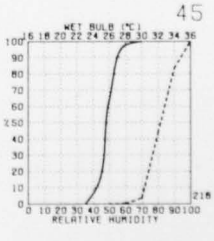






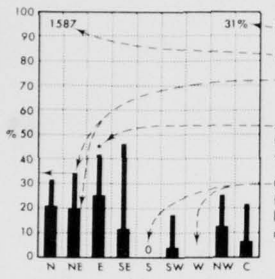






the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER



Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.

Percentage of present weather observations reporting precipitation.

Number of observations.

(*34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.*)

An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.

0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).

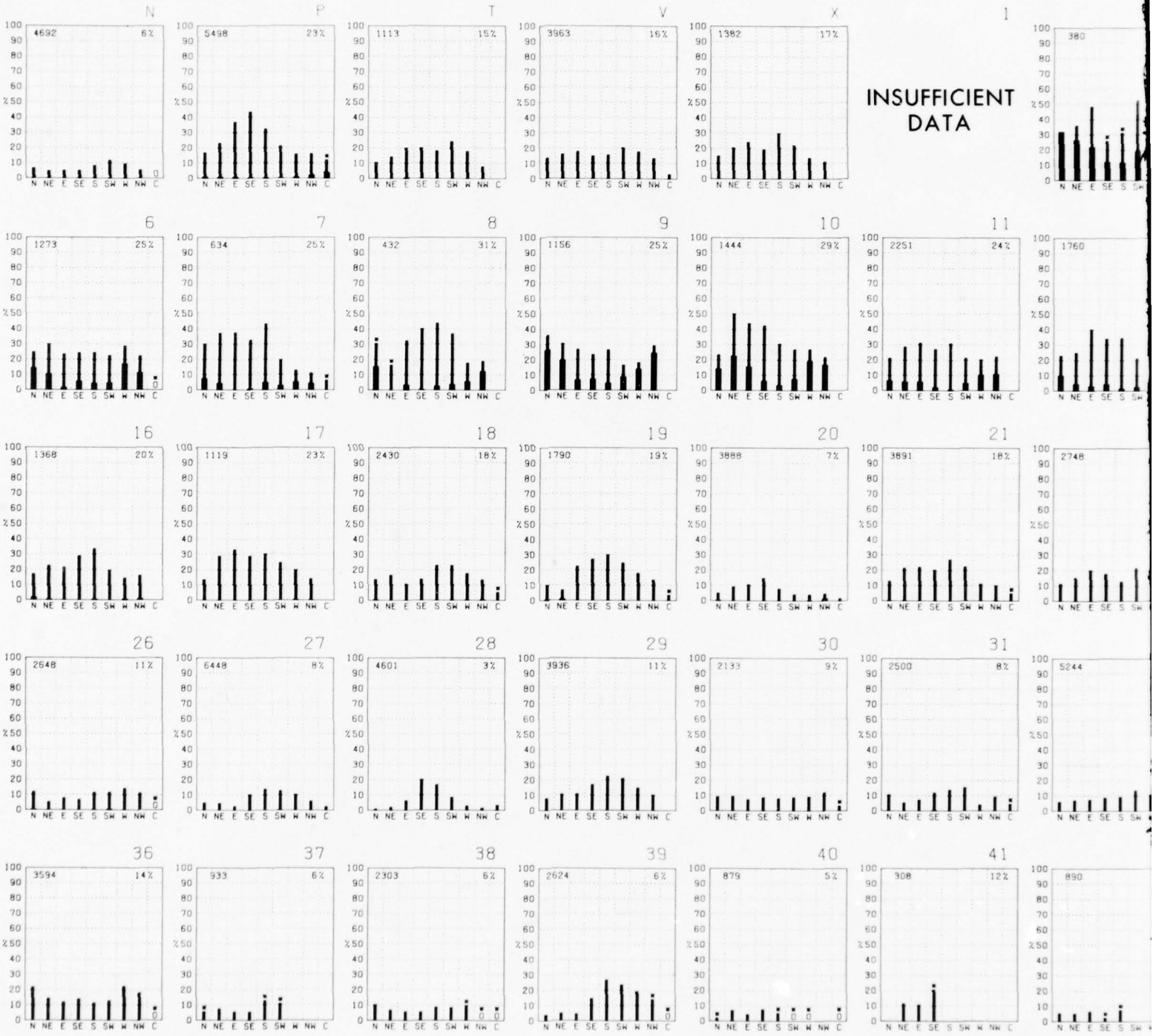
BLUE LINE - Percent frequency of precipitation observations reporting snow

RED LINE - Percent frequency of observations reporting precipitation

PRECIPITATION

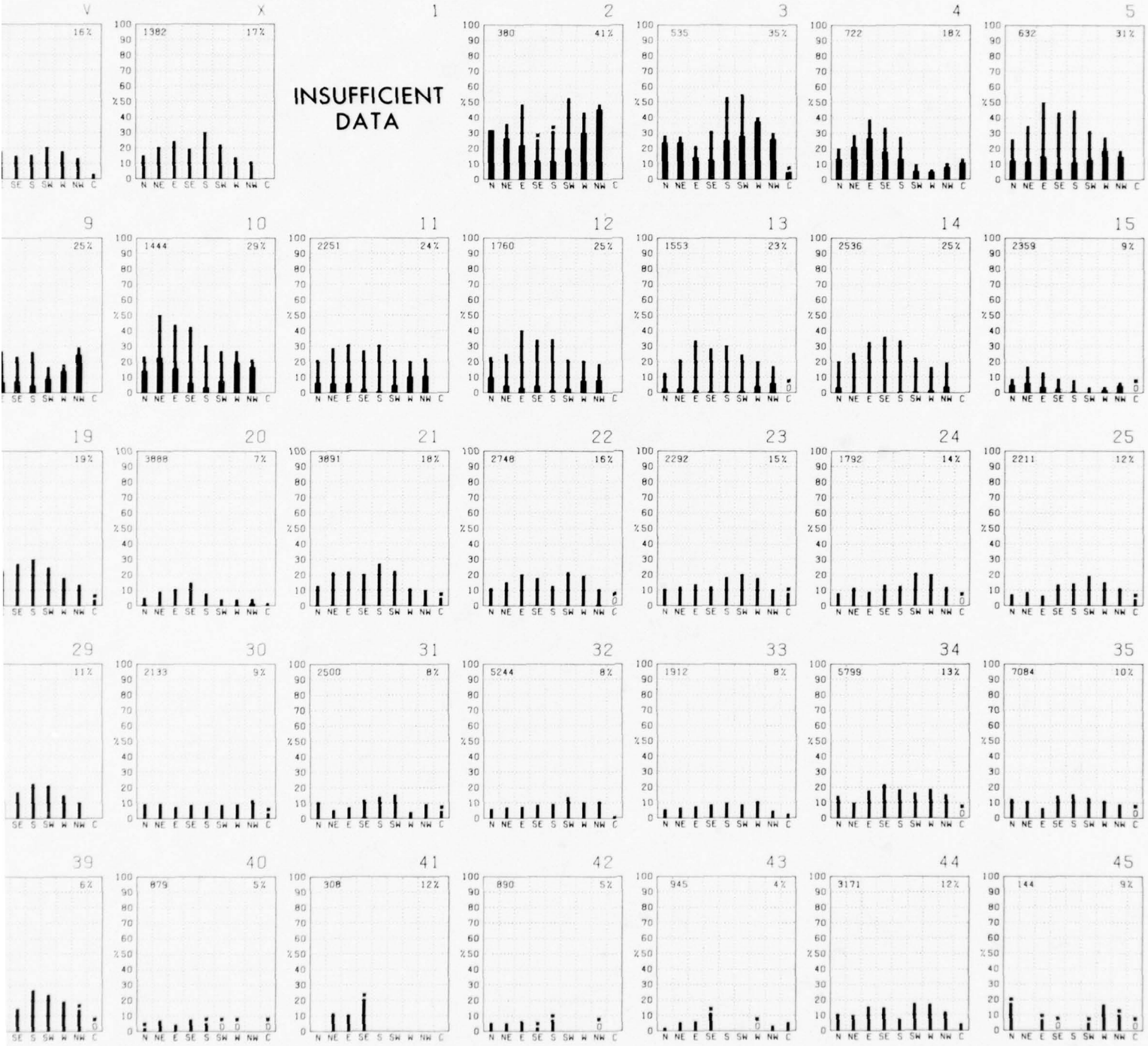


PRECIPITATION



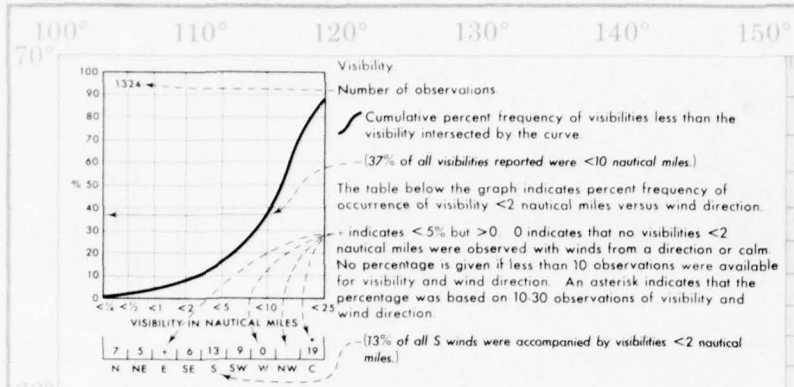
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NOVEMBER



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NOVEMBER



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

—(*37% of all visibilities reported were <10 nautical miles.*)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

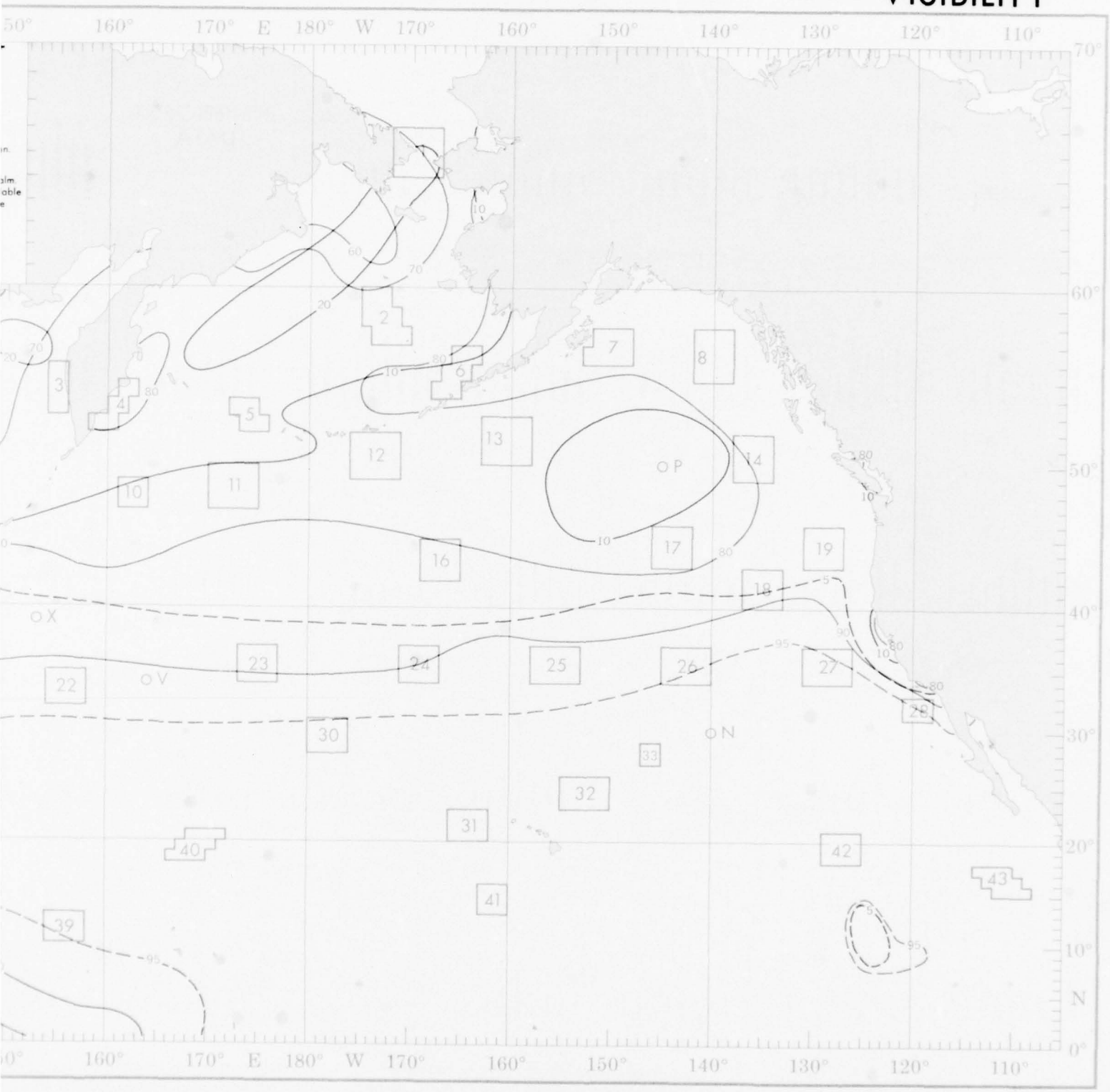
+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

—(*13% of all S winds were accompanied by visibilities <2 nautical miles.*)

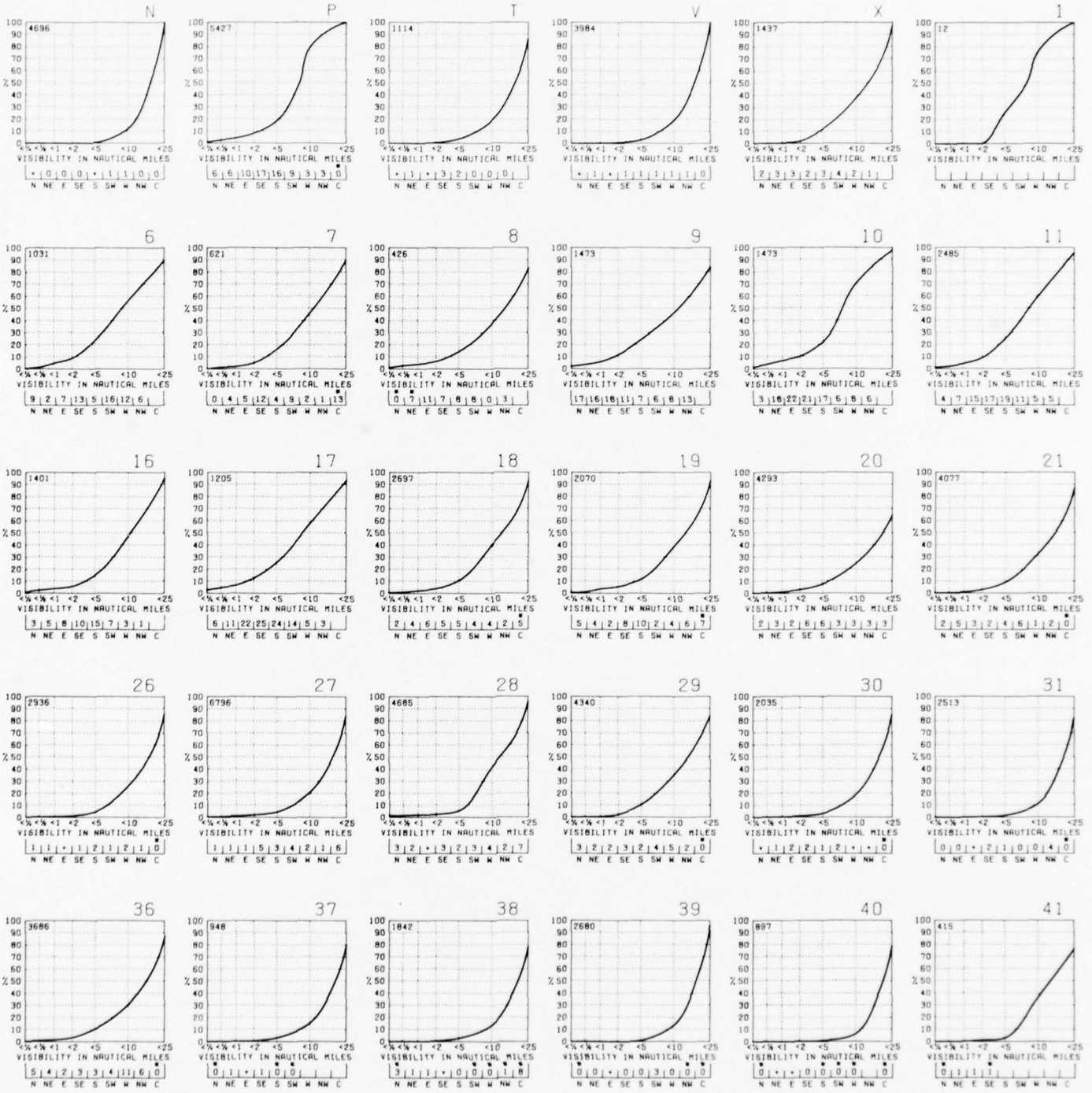
BLUE LINE — Percent frequency of visibilities ≥5 nautical miles

RED LINE — Percent frequency of visibilities <2 nautical miles

VISIBILITY

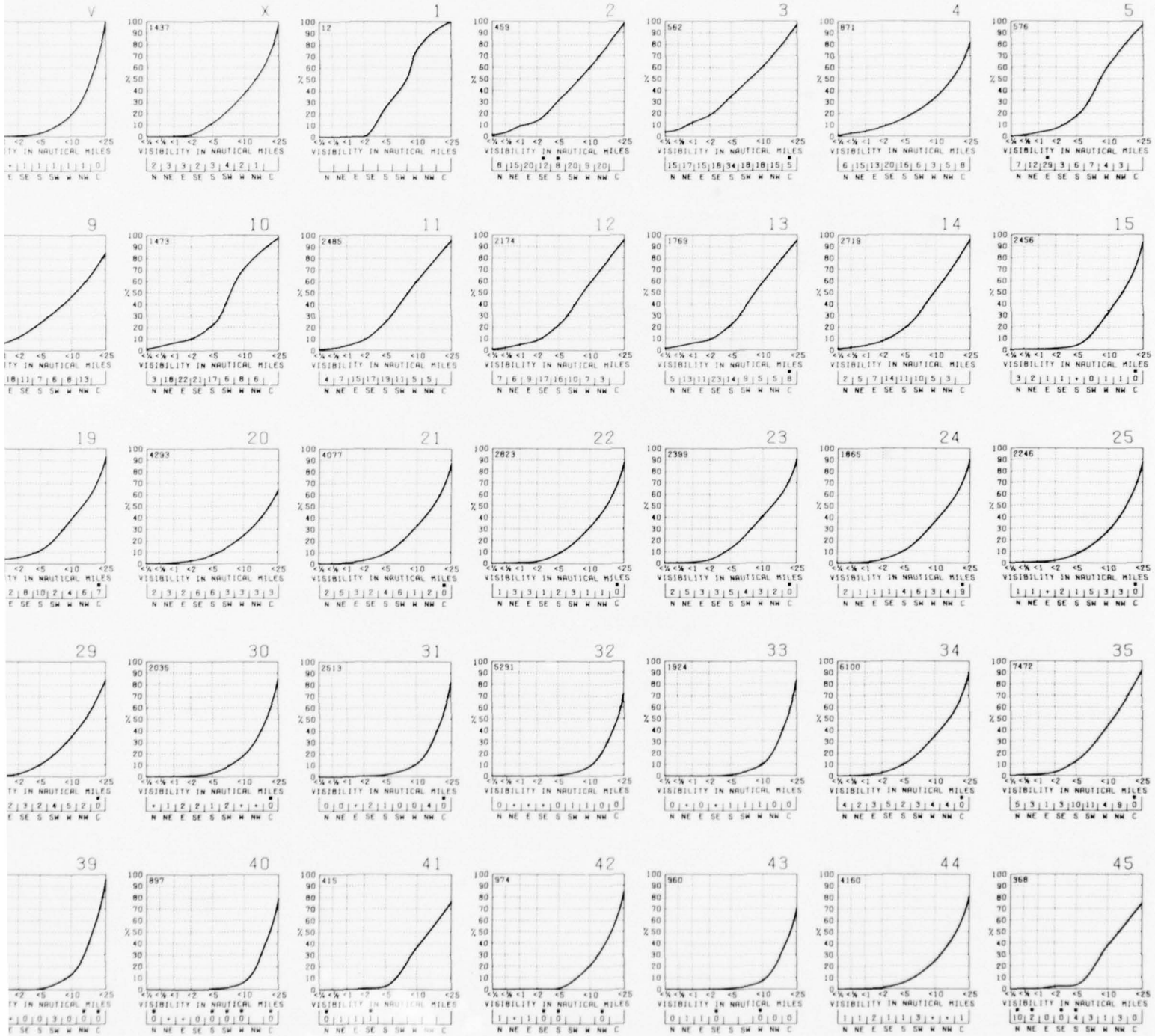

160°
170° E
180° W
170°
160°
150°
140°
130°
120°
110°
70°
60°
50°
40°
30°
20°
10°
N
OP
OX
OV
ON
1
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VISIBILITY



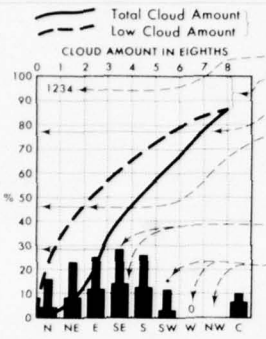
Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjust

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the objective compilation of available data for specified areas without regard to suspected biases.
yses (opposite page) are based on all available data subjectively adjusted where bias was evident.

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Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

≥5/8 ≥6/8 ≥7/8

Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

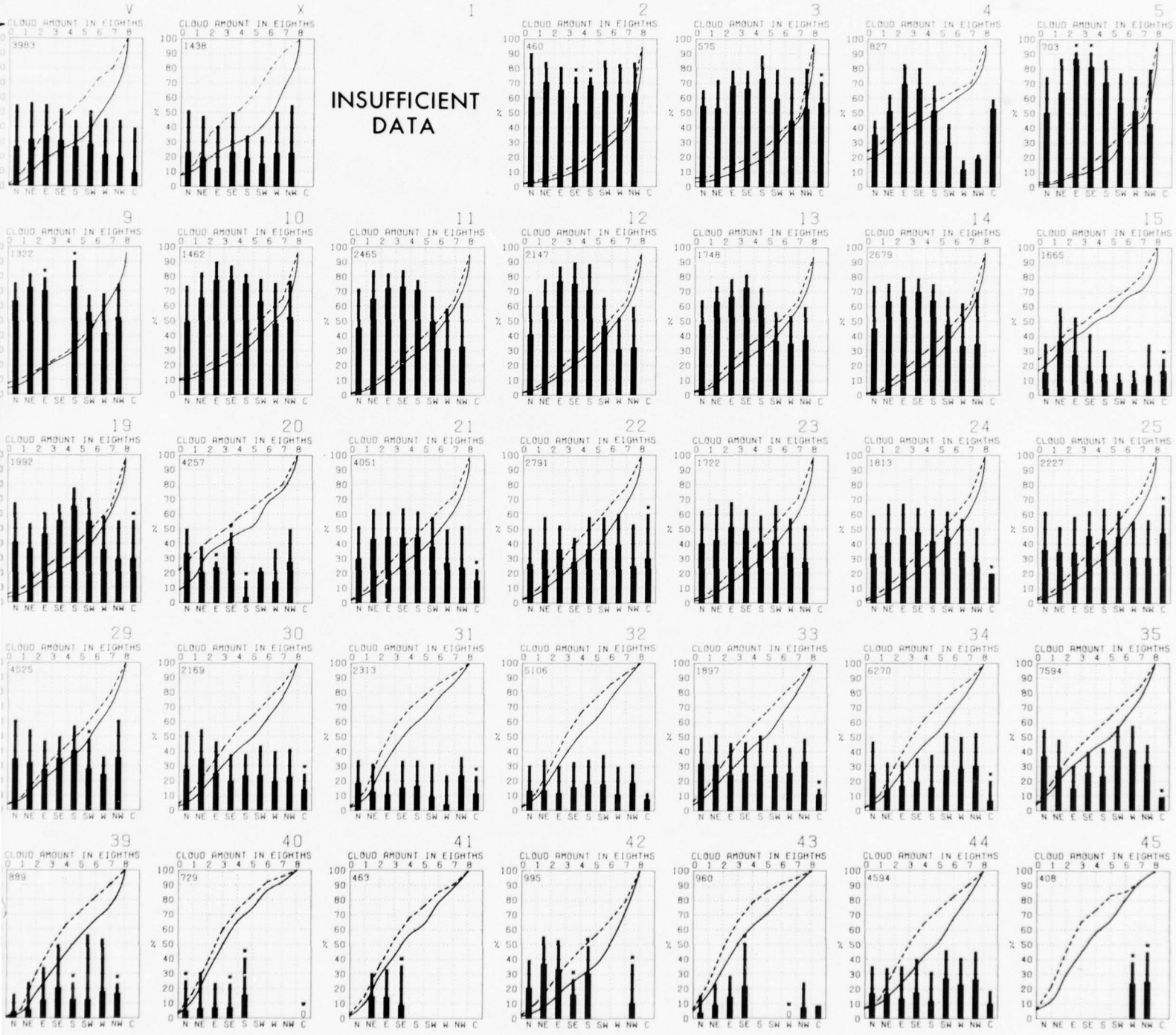

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
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60°
50°
40°
30°
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CLOUD COVER



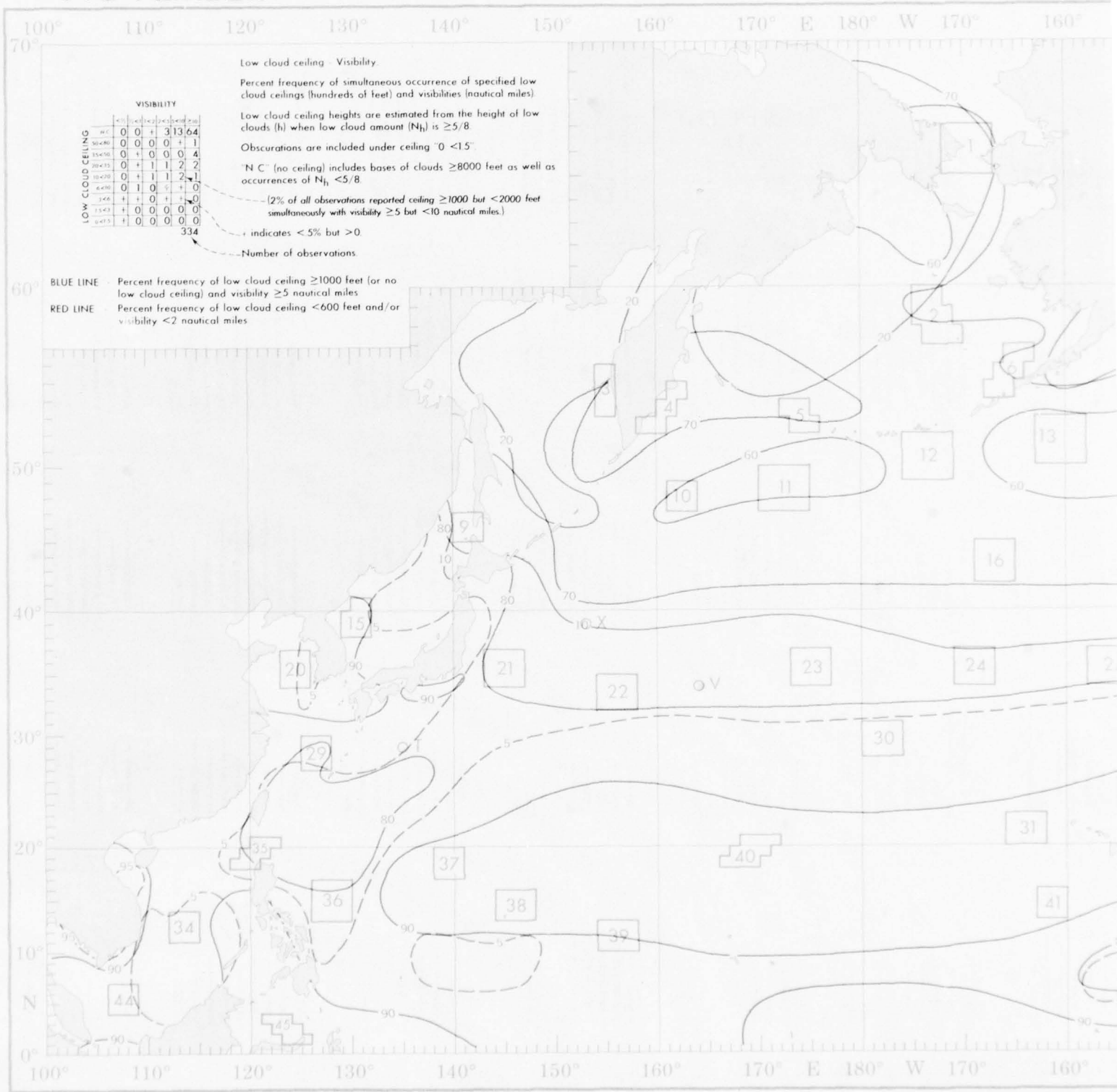
Graphs represent the objective compilation of available data for specified areas without regard to
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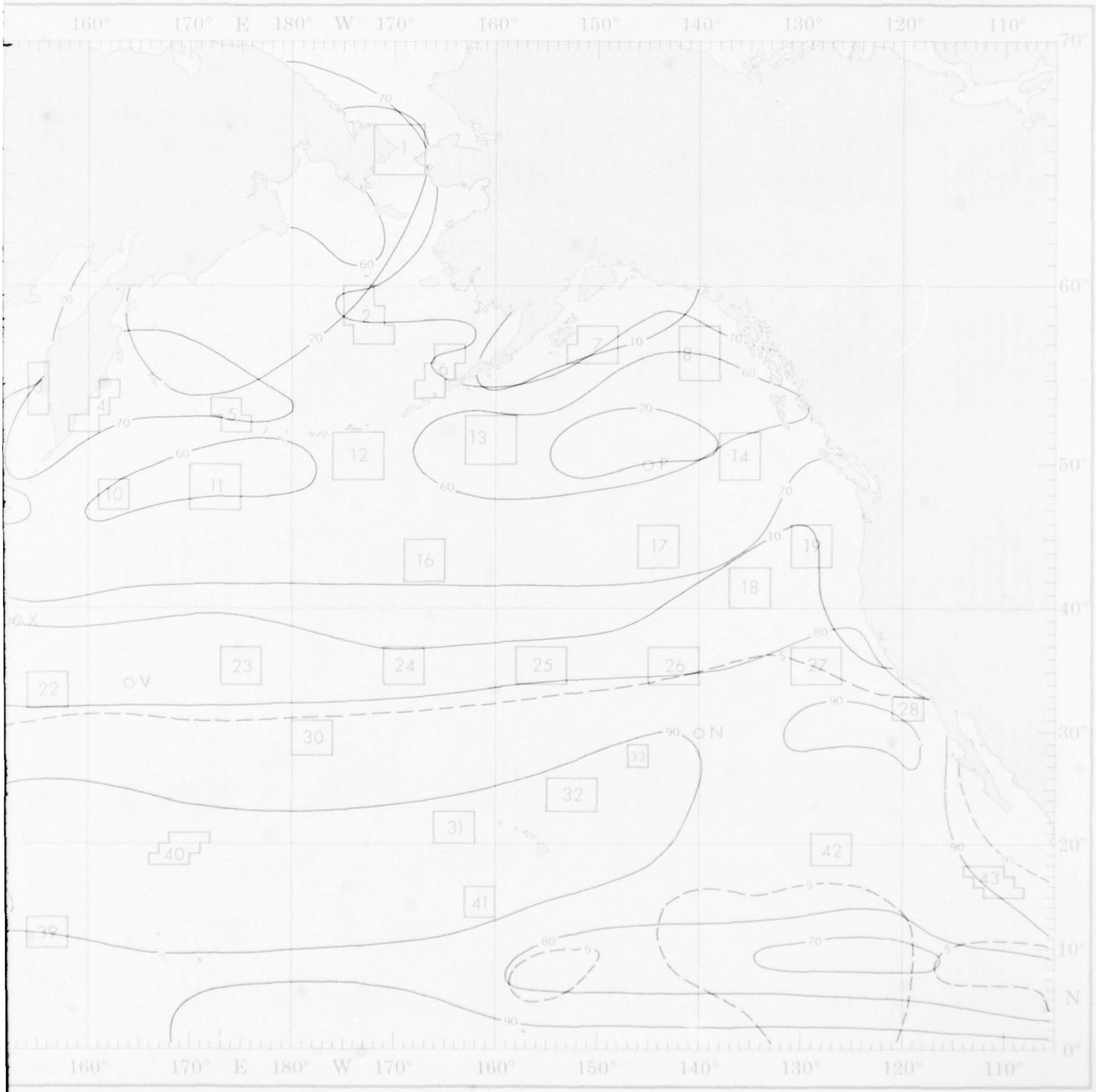
NOVEMBER



LOW CLOUD CEILING	<1	1-<2	2-<3	3-<5	5-<10	≥10
N C	0	0	+	3	13	64
50-<80	0	0	0	0	+	1
35-<50	0	+	0	0	0	4
20-<35	0	+	1	1	2	2
10-<20	0	+	1	1	2	1
6-<10	0	1	0	+	+	0
3-<6	+	+	0	+	+	0
1.5-<3	+	0	0	0	0	0
0-<1.5	+	0	0	0	0	0

334

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	43
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	6
20<35	0	+	+	+	5	33
10<20	0	0	+	+	2	5
6<10	+	0	+	0	+	+
3<6	0	+	+	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	0	0	0

4693

P

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	24	10
50<80	0	+	0	+	+	+
35<50	0	+	0	+	1	1
20<35	+	+	+	1	14	6
10<20	+	+	1	3	18	4
6<10	+	1	1	4	3	1
3<6	+	1	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	0	+	0	0	0

5426

T

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	7	65
50<80	0	0	0	0	+	2
35<50	0	0	0	0	+	4
20<35	0	0	+	+	4	9
10<20	0	0	+	2	3	1
6<10	0	0	0	+	+	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

802

V

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	+	5	46
50<80	0	0	0	0	+	1
35<50	0	0	0	+	1	2
20<35	0	+	+	+	4	24
10<20	0	+	+	1	5	8
6<10	0	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	+	0	+	0	+	0

3982

X

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	4	12	36
50<80	0	0	0	0	0	+
35<50	0	0	0	+	1	6
20<35	0	+	+	2	7	14
10<20	+	0	1	4	5	6
6<10	0	+	+	+	+	+
3<6	0	0	0	+	+	0
1.5<3	+	+	0	+	0	0
0<1.5	0	0	+	0	0	+

1191

6

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	2	8	17
50<80	0	0	0	0	+	1
35<50	0	0	0	2	2	4
20<35	0	+	+	1	4	6
10<20	+	1	2	4	11	12
6<10	+	0	+	2	4	4
3<6	0	0	+	2	1	2
1.5<3	0	+	+	+	+	+
0<1.5	1	2	1	2	1	+

769

7

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	6	26
50<80	0	0	0	0	0	1
35<50	0	0	0	0	1	4
20<35	0	+	+	2	8	9
10<20	+	0	1	4	7	10
6<10	0	0	+	2	3	5
3<6	0	0	1	1	1	+
1.5<3	0	0	0	+	+	0
0<1.5	1	+	1	1	1	0

545

8

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	+	28
50<80	0	0	0	0	+	1
35<50	0	0	0	0	0	1
20<35	+	0	0	+	1	5
10<20	0	0	0	+	4	21
6<10	0	0	+	3	9	9
3<6	0	0	+	1	3	2
1.5<3	+	0	+	+	1	+
0<1.5	2	1	1	1	1	1

336

9

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	4	24
50<80	0	0	+	0	+	1
35<50	0	0	0	1	2	5
20<35	+	+	1	3	8	16
10<20	1	+	1	4	5	7
6<10	1	+	1	1	1	1
3<6	0	+	0	1	1	0
1.5<3	0	0	0	0	+	1
0<1.5	2	1	1	1	1	1

639

10

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	14	11
50<80	0	+	0	+	+	1
35<50	0	0	0	0	1	1
20<35	+	+	+	1	15	9
10<20	+	1	1	5	16	5
6<10	+	+	1	3	3	2
3<6	1	1	+	1	1	+
1.5<3	0	0	0	0	+	0
0<1.5	3	+	+	+	+	+

1332

16

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	9	29
50<80	0	0	0	0	+	+
35<50	0	0	0	0	1	1
20<35	0	+	0	+	5	6
10<20	0	+	+	3	9	12
6<10	+	+	1	2	7	5
3<6	+	+	+	1	2	1
1.5<3	0	0	+	+	+	0
0<1.5	2	1	1	1	1	+

1106

17

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	7	22
50<80	0	0	0	0	0	+
35<50	0	0	0	0	1	1
20<35	0	0	+	1	3	6
10<20	+	+	1	4	10	11
6<10	1	0	+	4	6	5
3<6	+	+	+	2	2	2
1.5<3	0	0	+	1	+	0
0<1.5	4	1	2	2	1	+

780

18

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	+	5	27
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	2
20<35	0	0	+	+	7	17
10<20	0	+	+	2	7	16
6<10	0	+	+	1	3	5
3<6	+	0	+	1	1	1
1.5<3	0	0	0	+	+	+
0<1.5	1	+	1	1	+	+

1981

19

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	3	32
50<80	0	0	+	0	+	1
35<50	0	0	0	+	+	1
20<35	0	0	+	+	3	17
10<20	0	0	+	2	7	15
6<10	0	0	+	1	4	5
3<6	+	0	+	1	1	1
1.5<3	0	+	+	+	1	+
0<1.5	1	+	+	+	+	+

1524

20

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	53
50<80	0	0	0	0	0	3
35<50	0	+	0	1	1	5
20<35	0	0	0	0	3	13
10<20	0	0	0	+	3	5
6<10	0	0	0	+	1	2
3<6	0	0	0	0	1	4
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	+	0	0

383

26

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	3	39
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	+	+	2	9
10<20	0	+	0	1	5	17
6<10	0	0	+	1	5	10
3<6	0	+	+	+	1	1
1.5<3	0	0	0	0	+	+
0<1.5	+	0	+	+	+	1

2151

27

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	+	3	45
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	+	0	0	+	1	12
10<20	0	+	+	1	3	17
6<10	+	+	+	+	2	7
3<6	0	+	+	+	1	1
1.5<3	+	0	+	+	+	+
0<1.5	+	+	+	+	+	+

5006

28

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	2	25	42
50<80	0	0	0	+	+	+
35<50	0	0	+	+	+	1
20<35	0	0	0	+	3	4
10<20	+	+	0	+	6	6
6<10	+	0	+	+	3	2
3<6	0	+	0	+	1	1
1.5<3	0	0	+	0	+	+
0<1.5	1	+	+	+	+	+

3890

29

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	37
50<80	0	0	0	+	+	1
35<50	0	0	0	+	1	2
20<35	0	0	+	1	4	8
10<20	0	+	+	3	8	13
6<10	+	+	+	2	4	5
3<6	0	0	+	1	1	1
1.5<3	0	+	+	0	+	+
0<1.5	+	+	+	+	+	+

2484

30

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	5	51
50<80	0	0	0	+	+	1
35<50	0	0	0	0	+	2
20<35	0	+	0	+	2	9
10<20	+	0	+	+	4	12
6<10	0	0	0	1	2	7
3<6	+	0	+	+	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	+	+	+	+

1515

36

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	2	11	53
50<80	0	0	0	0	+	+
35<50	0	0	+	+	+	1
20<35	0	0	+	1	2	3
10<20	+	+	+	1	4	7
6<10	+	+	+	1	4	4
3<6	+	+	+	1	1	1
1.5<3	0	0	+	+	+	0
0<1.5	+	+	+	+	+	+

[illegible]

37

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	8	69
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	2
10<20	0	0	+	+	1	7
6<10	0	+	+	1	3	3
3<6	0	0	0	+	+	1
1.5<3	0	0	0	+	+	0
0<1.5	0	0	0	0	0	0

687

38

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	8	69
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	+	0	0	0	1	4
10<20	0	0	0	1	2	6
6<10	0	0	+	+	3	3
3<6	0	0	+	+	+	1
1.5<3	0	0	0	+	+	0
0<1.5	+	+	+	0	0	0

1154

39

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	7	66
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	+
20<35	0	0	0	0	1	7
10<20	0	0	+	1	2	8
6<10	0	0	0	1	1	3
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

547

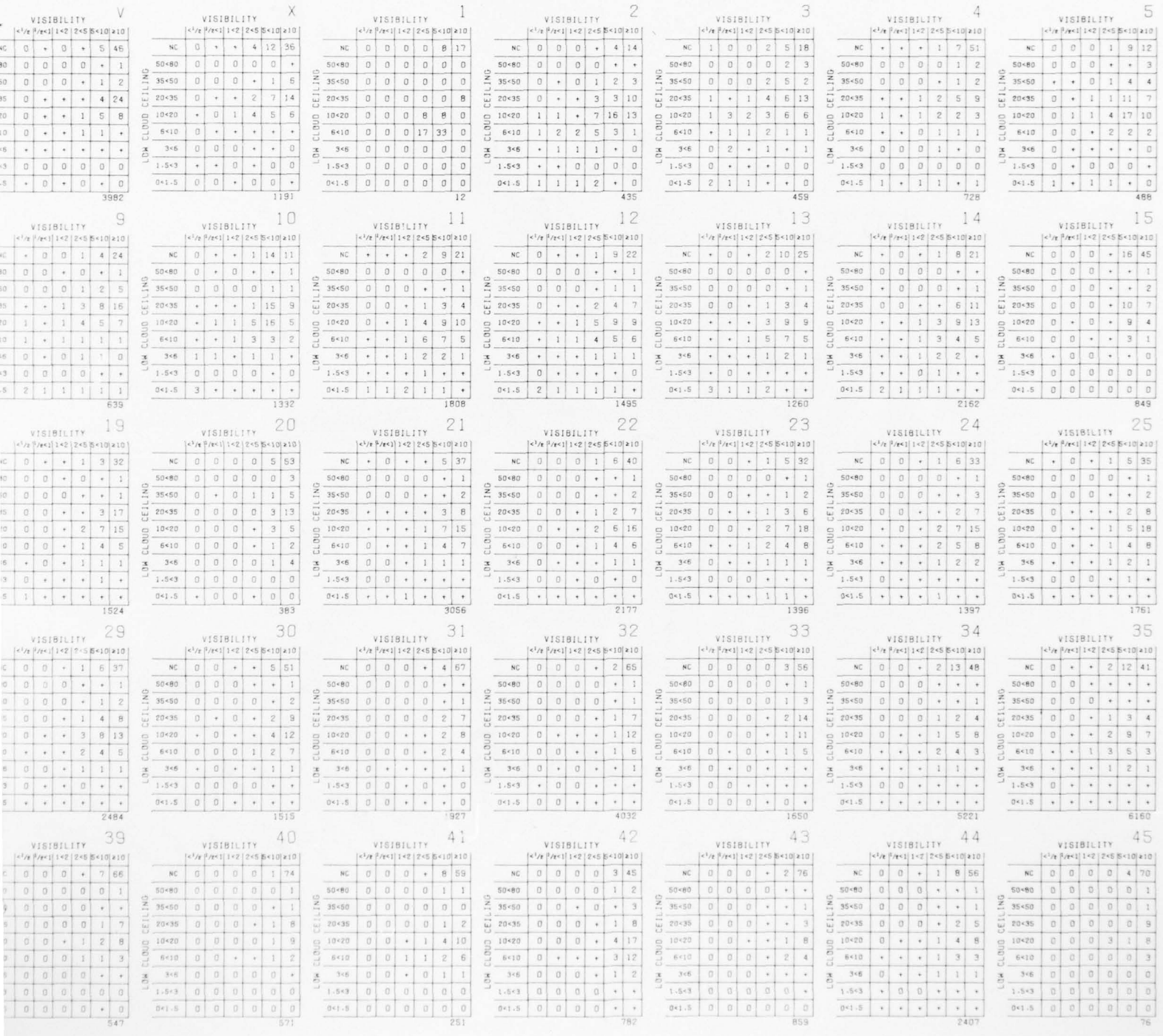
40

LOW CLOUD CEILING	VISIBILITY <1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	74
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	8
10<20	0	0	0	0	1	9
6<10	0	0	+	+	1	2
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

571

Graphs represent the objective compilation of available data for specifie
The isopleth analyses (opposite page) are based on all available data su

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V

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	0	+	5	46
50<80	0	0	0	0	+	1
35<50	0	0	0	+	1	2
20<35	0	+	+	+	4	24
10<20	0	+	+	1	5	8
6<10	0	+	+	1	1	+
3<6	+	+	+	+	+	+
1.5<3	0	0	0	0	0	0
0<1.5	+	0	+	0	+	0

3982

X

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	4	12	36
50<80	0	0	0	0	0	+
35<50	0	0	0	+	1	5
20<35	0	+	+	2	7	14
10<20	+	0	1	4	5	6
6<10	0	+	+	+	+	+
3<6	0	0	0	+	+	0
1.5<3	+	+	0	+	0	0
0<1.5	0	0	+	0	0	+

1191

1

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	17
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	0
20<35	0	0	0	0	0	8
10<20	0	0	0	8	8	0
6<10	0	0	0	17	33	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

12

2

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	14
50<80	0	0	0	0	+	+
35<50	0	+	0	1	2	3
20<35	0	+	+	3	3	10
10<20	1	1	+	7	16	13
6<10	1	2	2	5	3	1
3<6	+	1	1	1	+	0
1.5<3	+	+	0	0	0	0
0<1.5	1	1	1	2	+	0

435

3

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	1	0	0	2	5	18
50<80	0	0	0	0	2	3
35<50	0	0	0	2	5	2
20<35	1	+	1	4	6	13
10<20	1	3	2	3	6	6
6<10	+	1	1	2	1	1
3<6	0	2	+	1	+	1
1.5<3	0	+	+	+	0	0
0<1.5	2	1	1	+	+	0

459

4

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	7	51
50<80	0	0	0	0	1	2
35<50	0	0	0	+	1	2
20<35	+	+	1	2	5	9
10<20	1	+	1	2	2	3
6<10	+	+	0	1	1	1
3<6	0	0	0	1	+	0
1.5<3	0	0	0	0	0	0
0<1.5	1	+	1	1	+	1

728

5

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	9	12
50<80	0	0	0	+	+	3
35<50	+	+	0	1	4	4
20<35	0	+	1	1	11	7
10<20	0	1	1	4	17	10
6<10	0	0	+	2	2	2
3<6	0	+	+	+	+	0
1.5<3	0	+	0	0	0	+
0<1.5	1	+	1	1	+	0

488

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	0	1	4	24
50<80	0	0	0	+	0	+
35<50	0	0	0	0	1	2
20<35	+	+	1	3	8	16
10<20	1	+	1	4	5	7
6<10	1	+	1	1	1	1
3<6	0	+	0	1	1	0
1.5<3	0	0	0	0	+	+
0<1.5	2	1	1	1	1	1

639

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	14	11
50<80	0	+	0	+	+	1
35<50	0	0	0	0	1	1
20<35	+	+	+	1	15	9
10<20	+	1	1	5	16	5
6<10	+	+	1	3	3	2
3<6	1	1	+	1	1	+
1.5<3	0	0	0	0	+	0
0<1.5	3	+	+	+	+	+

1332

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	2	9	21
50<80	0	0	0	0	0	+
35<50	0	0	0	+	+	1
20<35	0	0	+	1	3	4
10<20	0	+	1	4	9	10
6<10	+	+	1	6	7	5
3<6	+	+	1	2	2	1
1.5<3	+	+	+	1	+	+
0<1.5	1	1	2	1	1	+

1808

12

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	9	22
50<80	0	0	0	+	+	1
35<50	0	0	0	+	1	1
20<35	0	+	+	2	4	7
10<20	+	+	1	5	9	9
6<10	+	1	1	4	5	6
3<6	+	+	+	1	1	1
1.5<3	0	+	+	+	+	0
0<1.5	2	1	1	1	1	+

1495

13

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	2	10	25
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	0	0	+	1	3	4
10<20	+	+	+	3	9	9
6<10	+	+	1	5	7	5
3<6	+	+	+	1	2	1
1.5<3	+	0	+	+	+	+
0<1.5	3	1	1	2	+	+

1260

14

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	1	8	21
50<80	0	0	0	0	+	+
35<50	+	0	0	0	+	1
20<35	0	0	0	+	6	11
10<20	+	+	1	3	9	13
6<10	+	+	1	3	4	5
3<6	+	+	1	2	2	+
1.5<3	+	+	0	1	+	+
0<1.5	2	1	1	1	+	+

2162

15

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	16	45
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	10	7
10<20	0	+	0	+	9	4
6<10	0	0	+	+	3	1
3<6	+	0	0	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

849

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	1	3	32
50<80	0	0	0	+	0	+
35<50	0	0	0	+	+	1
20<35	0	0	+	+	3	17
10<20	0	0	+	2	7	15
6<10	0	0	+	1	4	5
3<6	+	0	+	1	1	1
1.5<3	0	+	+	+	1	+
0<1.5	1	+	+	+	+	+

1524

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	5	53
50<80	0	0	0	0	0	3
35<50	0	+	0	1	1	5
20<35	0	0	0	0	3	13
10<20	0	0	0	+	3	5
6<10	0	0	0	+	1	2
3<6	0	0	0	0	1	4
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	+	0	0

383

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	+	5	37
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	+	+	+	+	3	8
10<20	+	+	+	1	7	15
6<10	0	+	+	1	4	7
3<6	0	0	+	1	1	1
1.5<3	0	0	+	+	+	+
0<1.5	+	+	1	+	+	+

3056

22

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	40
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	0	0	+	1	2	7
10<20	0	+	+	2	6	16
6<10	0	0	+	1	4	6
3<6	0	+	+	+	1	1
1.5<3	0	0	+	0	+	0
0<1.5	+	+	+	+	+	+

2177

23

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	32
50<80	0	0	0	0	+	1
35<50	0	0	+	+	1	2
20<35	0	+	+	1	3	6
10<20	0	0	+	2	7	18
6<10	+	+	1	2	4	8
3<6	0	+	+	1	1	1
1.5<3	0	0	0	+	+	+
0<1.5	+	+	+	1	1	+

1396

24

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	33
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	3
20<35	0	0	0	+	2	7
10<20	+	0	+	2	7	15
6<10	+	+	+	2	5	8
3<6	+	+	+	1	2	2
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	1	+	+

1397

25

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	1	5	35
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	2	8
10<20	0	+	+	1	5	18
6<10	0	+	+	1	4	8
3<6	+	+	+	1	2	1
1.5<3	0	0	0	+	1	+
0<1.5	+	+	+	+	+	+

1761

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	6	37
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	1	4
10<20	0	+	+	3	8	13
6<10	0	+	+	2	4	5
3<6	0	0	+	1	1	1
1.5<3	0	+	+	0	+	+
0<1.5	+	+	+	+	+	+

2484

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	5	51
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	+	0	+	2	9
10<20	+	0	+	+	4	12
6<10	0	0	0	1	2	7
3<6	+	0	+	+	1	1
1.5<3	0	0	0	0	+	+
0<1.5	0	0	+	+	+	+

1515

31

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	4	67
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	2	7
10<20	0	0	0	+	2	8
6<10	0	0	0	+	2	4
3<6	0	+	+	+	+	1
1.5<3	0	0	+	0	+	0
0<1.5	0	0	+	+	+	+

1927

32

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	65
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	0	0	+	1	7
10<20	0	+	+	+	1	12
6<10	0	0	+	+	1	6
3<6	0	+	0	+	+	1
1.5<3	+	0	0	+	+	+
0<1.5	0	0	+	+	+	+

4032

33

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	56
50<80	0	0	0	0	+	1
35<50	0	0	0	0	1	3
20<35	0	0	0	+	2	14
10<20	0	0	0	+	1	11
6<10	0	+	0	+	1	5
3<6	0	+	0	+	+	+
1.5<3	0	0	+	+	+	+
0<1.5	0	0	0	+	0	+

1650

34

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	2	13	48
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	1
20<35	0	0	0	1	2	4
10<20	0	+	+	1	5	8
6<10	+	+	+	2	4	3
3<6	+	+	+	1	1	+
1.5<3	0	0	+	+	+	+
0<1.5	+	+	+	+	+	+

5221

35

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	2	12	41
50<80	0	0	+	+	+	+
35<50	0	0	0	+	+	+
20<35	0	0	+	1	3	4
10<20	0	+	+	2	9	7
6<10	+	+	1	3	5	3
3<6	+	+	+	1	2	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	+

6160

39

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	7	66
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	+
20<35	0	0	0	0	1	7
10<20	0	0	+	1	2	8
6<10	0	0	0	1	1	3
3<6	0	0	0	0	+	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	+	0

547

40

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	1	74
50<80	0	0	0	0	0	1
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	8
10<20	0	0	0	0	1	9
6<10	0	0	+	+	1	2
3<6	0	0	0	0	0	+
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

571

41

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	8	59
50<80	0	0	0	0	1	1
35<50	0	0	0	0	0	0
20<35	0	0	0	0	1	2
10<20	0	0	+	1	4	10
6<10	0	0	1	1	2	6
3<6	0	0	+	0	1	1
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

251

42

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	3	45
50<80	0	0	0	0	1	2
35<50	0	0	0	+	0	3
20<35	0	0	0	+	1	8
10<20	0	0	0	+	4	17
6<10	0	0	+	+	3	12
3<6	0	0	0	+	1	2
1.5<3	0	0	0	0	+	+
0<1.5	0	0	0	0	+	+

782

43

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	76
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	0	0	0	+	+	3
10<20	0	0	+	+	1	8
6<10	0	0	0	+	2	4
3<6	0	0	0	+	+	+
1.5<3	0	0	0	0	0	+
0<1.5	0	0	0	0	0	0

859

44

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	8	56
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	1
20<35	0	0	0	+	2	5
10<20	0	+	+	1	4	8
6<10	+	+	+	1	3	3
3<6	0	+	+	1	1	1
1.5<3	+	0	0	+	+	+
0<1.5	+	+	+	+	+	+

2407

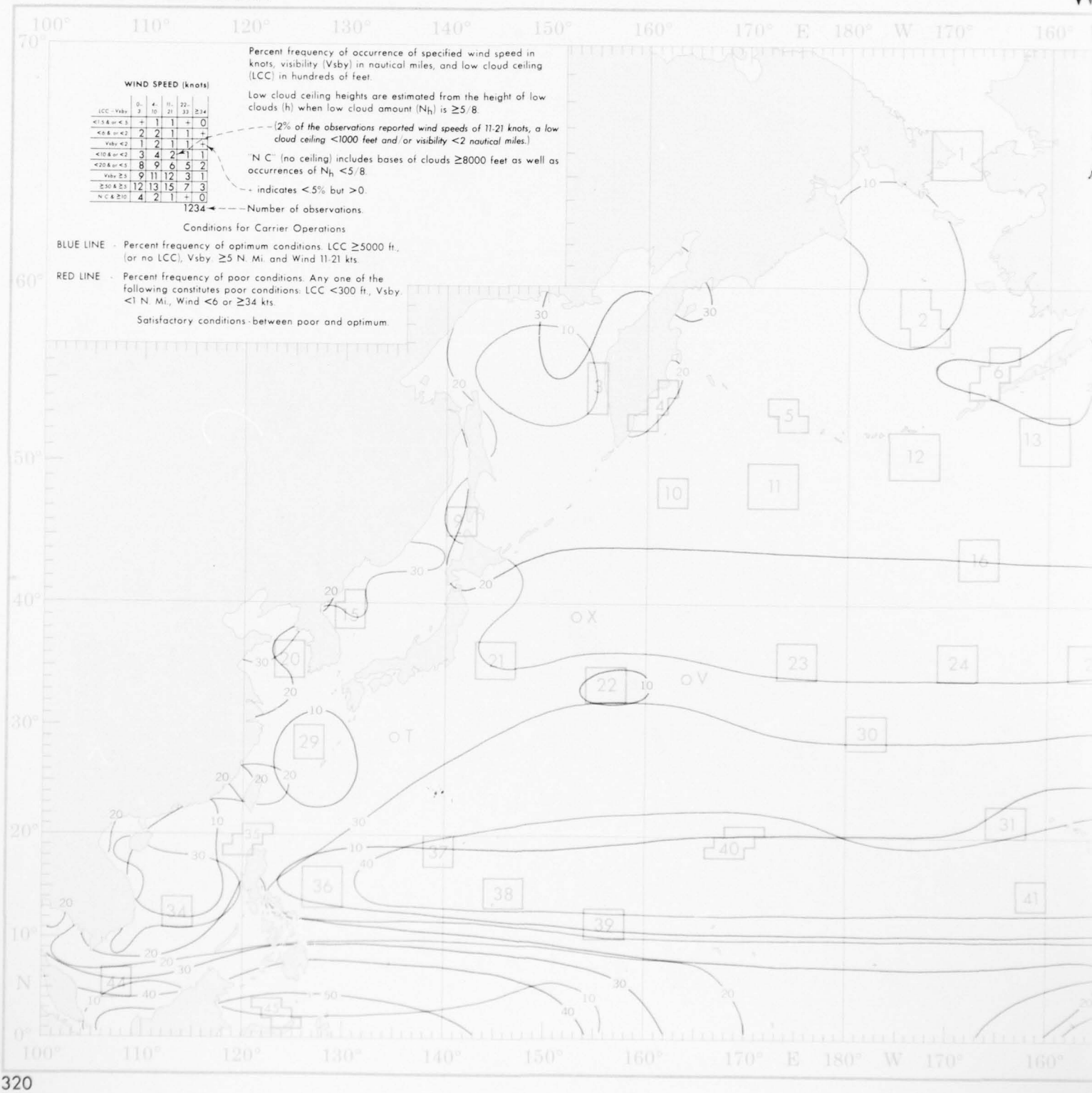
45

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	4	70
50<80	0	0	0	0	0	1
35<50	0	0	0	0	0	1
20<35	0	0	0	0	0	9
10<20	0	0	0	3	1	8
6<10	0	0	0	0	0	3
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

76

ent the objective compilation of available data for specified areas without regard to suspected biases.
nalyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER



WIND SPEED (knots)

LCC – Vsby	0–3	4–10	11–21	22–33	≥34
<1.5 & or <.5	+	1	1	+	0
<6 & or <2	2	2	1	1	+
Vsby <2	1	2	1	1	+
<10 & or <2	3	4	2	1	1
<20 & or <5	8	9	6	5	2
Vsby ≥5	9	11	12	3	1
≥30 & ≥5	12	13	15	7	3
N C & ≥10	4	2	1	+	0

1234 ← Number of observations.

Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.

Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.

(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)

"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.

+ indicates <.5% but >0.

Conditions for Carrier Operations

BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.

RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.

Satisfactory conditions between poor and optimum.

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	+	+	+	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	+	+	+	0
<20 & OR <5	+	3	4	1	+
VSBY ≥5	7	34	49	9	+
≥50 & ≥5	4	18	23	4	+
NC & ≥10	4	16	20	3	+

4690

P

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	1	3	4	2
VSBY <2	+	1	2	3	1
<10 & OR <2	+	2	5	7	4
<20 & OR <5	1	3	11	18	11
VSBY ≥5	1	8	26	32	15
≥50 & ≥5	1	4	12	13	6
NC & ≥10	+	1	4	3	1

5417

T

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	+	0	+
VSBY <2	0	0	+	0	+
<10 & OR <2	0	+	1	+	+
<20 & OR <5	0	+	3	3	1
VSBY ≥5	2	17	55	21	2
≥50 & ≥5	2	14	43	15	1
NC & ≥10	2	12	39	12	+

801

V

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	1	1	1
<20 & OR <5	+	2	7	7	2
VSBY ≥5	2	19	47	26	3
≥50 & ≥5	2	12	26	11	1
NC & ≥10	1	11	23	9	1

3962

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<6 & OR <2	+	+	1	+	1
VSBY <2	+	+	1	+	1
<10 & OR <2	+	+	1	1	1
<20 & OR <5	+	1	7	9	6
VSBY ≥5	2	11	35	30	10
≥50 & ≥5	2	8	21	14	5
NC & ≥10	2	6	17	9	2

1191

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	22	44	0
<20 & OR <5	0	0	33	44	0
VSBY ≥5	0	11	33	33	0
≥50 & ≥5	0	11	11	0	0
NC & ≥10	0	11	0	0	0

9

6

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	2	2
<6 & OR <2	0	3	6	4	5
VSBY <2	0	1	2	3	3
<10 & OR <2	+	3	9	7	7
<20 & OR <5	1	10	23	16	9
VSBY ≥5	2	19	31	20	5
≥50 & ≥5	1	8	11	5	2
NC & ≥10	1	5	7	3	1

753

7

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	2	1	1
<6 & OR <2	+	1	3	3	3
VSBY <2	+	1	2	1	1
<10 & OR <2	+	3	7	5	5
<20 & OR <5	1	6	16	13	8
VSBY ≥5	3	14	38	21	8
≥50 & ≥5	2	7	16	7	2
NC & ≥10	2	5	12	5	2

537

8

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	3	1	3
<6 & OR <2	1	1	6	4	4
VSBY <2	1	1	1	1	2
<10 & OR <2	1	6	13	11	8
<20 & OR <5	2	10	23	19	10
VSBY ≥5	1	20	37	21	7
≥50 & ≥5	1	10	14	4	1
NC & ≥10	1	9	13	4	1

335

9

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	4	4	+
<6 & OR <2	0	1	7	6	1
VSBY <2	0	1	4	3	1
<10 & OR <2	0	2	8	7	1
<20 & OR <5	1	5	17	13	2
VSBY ≥5	2	16	39	21	3
≥50 & ≥5	1	8	12	6	1
NC & ≥10	+	7	10	5	1

447

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	2
<6 & OR <2	0	1	3	4	4
VSBY <2	0	1	2	3	4
<10 & OR <2	0	2	5	7	6
<20 & OR <5	0	5	13	18	12
VSBY ≥5	1	10	29	27	12
≥50 & ≥5	+	4	11	7	3
NC & ≥10	+	2	5	2	1

1330

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	5	5	4
VSBY <2	+	1	2	3	3
<10 & OR <2	+	5	11	12	6
<20 & OR <5	+	9	21	21	9
VSBY ≥5	1	15	30	23	6
≥50 & ≥5	1	6	13	9	2
NC & ≥10	+	4	9	6	1

1802

16

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	3	2	1
<6 & OR <2	0	1	5	4	2
VSBY <2	0	1	3	1	1
<10 & OR <2	0	2	10	9	3
<20 & OR <5	+	5	20	16	7
VSBY ≥5	1	11	39	29	8
≥50 & ≥5	+	5	19	12	2
NC & ≥10	+	4	15	9	1

1100

17

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	3	1
<6 & OR <2	+	3	7	6	3
VSBY <2	+	2	4	2	1
<10 & OR <2	+	5	12	12	5
<20 & OR <5	+	8	23	21	9
VSBY ≥5	1	10	34	24	7
≥50 & ≥5	1	4	13	9	3
NC & ≥10	+	3	10	6	3

776

18

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	1	2	2	1
VSBY <2	+	1	1	1	+
<10 & OR <2	+	3	6	5	1
<20 & OR <5	1	8	17	14	3
VSBY ≥5	2	21	43	22	4
≥50 & ≥5	1	9	16	6	1
NC & ≥10	1	8	13	4	1

1950

19

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	2	1
VSBY <2	+	+	2	1	+
<10 & OR <2	+	3	7	5	2
<20 & OR <5	1	7	19	11	4
VSBY ≥5	3	18	43	22	5
≥50 & ≥5	1	10	18	7	1
NC & ≥10	1	9	16	5	+

1518

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	2	2	1
VSBY <2	0	0	+	0	+
<10 & OR <2	0	2	3	3	1
<20 & OR <5	+	4	7	6	1
VSBY ≥5	6	28	47	16	2
≥50 & ≥5	5	21	29	6	0
NC & ≥10	4	18	26	5	0

378

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	0	1	3	2	1
VSBY <2	0	+	1	1	+
<10 & OR <2	0	2	8	7	2
<20 & OR <5	+	6	19	13	4
VSBY ≥5	2	21	43	23	5
≥50 & ≥5	1	12	20	8	1
NC & ≥10	1	11	18	7	1

3041

26

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	1	0
<6 & OR <2	+	2	2	1	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	6	8	6	1
<20 & OR <5	1	12	19	10	2
VSBY ≥5	3	28	44	19	4
≥50 & ≥5	2	13	19	7	1
NC & ≥10	1	12	18	6	1

2137

27

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	2	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	1	5	7	2	+
<20 & OR <5	1	12	17	5	1
VSBY ≥5	5	34	45	11	1
≥50 & ≥5	3	18	23	5	+
NC & ≥10	2	16	21	5	+

4981

28

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	+	+	0
<6 & OR <2	1	2	1	+	0
VSBY <2	+	1	+	+	0
<10 & OR <2	1	4	3	+	+
<20 & OR <5	2	11	9	1	+
VSBY ≥5	9	43	37	5	+
≥50 & ≥5	6	31	26	4	+
NC & ≥10	3	19	17	3	+

3867

29

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	2	1	+
VSBY <2	+	+	1	+	+
<10 & OR <2	+	3	8	4	1
<20 & OR <5	+	7	22	11	2
VSBY ≥5	1	22	51	15	1
≥50 & ≥5	1	14	25	4	+
NC & ≥10	1	12	21	3	+

2473

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	1	1	+
VSBY <2	0	0	+	0	0
<10 & OR <2	+	3	6	3	1
<20 & OR <5	+	7	14	7	1
VSBY ≥5	3	26	50	16	3
≥50 & ≥5	3	17	30	6	1
NC & ≥10	2	16	27	5	1

1502

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	5	1	+
<20 & OR <5	+	4	11	3	+
VSBY ≥5	3	27	55	12	1
≥50 & ≥5	3	21	39	8	+
NC & ≥10	3	20	37	7	0

1918

36

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	+	+
<6 & OR <2	+	1	3	2	1
VSBY <2	0	+	1	1	+
<10 & OR <2	+	3	8	4	1
<20 & OR <5	+	6	17	6	1
VSBY ≥5	2	31	49	7	1
≥50 & ≥5	2	25	34	3	+
NC & ≥10	1	21	28	2	0

3030

37

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	1	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	2	4	2	+
<20 & OR <5	+	6	10	3	+
VSBY ≥5	2	31	56	8	+
≥50 & ≥5	2	26	45	5	0
NC & ≥10	1	22	41	4	0

686

38

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	+
<6 & OR <2	+	+	1	+	+
VSBY <2	+	+	+	0	+
<10 & OR <2	+	2	3	2	+
<20 & OR <5	+	4	8	4	+
VSBY ≥5	2	30	54	10	1
≥50 & ≥5	1	26	43	7	+
NC & ≥10	1	23	38	6	+

1150

39

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	0	1	0	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	+	5	1	0
<20 & OR <5	+	4	11	2	0
VSBY ≥5	10	31	45	11	+
≥50 & ≥5	10	25	32	8	+
NC & ≥10	9	23	28	6	+

547

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	1	2	1	0
<20 & OR <5	+	2	10	2	+
VSBY ≥5	3	23	63	10	1
≥50 & ≥5	3	19	47	7	1
NC & ≥10	3	18	46	6	1

568

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	1	+	+	0
<10 & OR <2	0	2	7	2	0
<20 & OR <5	+	3	19	5	0
VSBY ≥5	1	20	59	14	2
≥50 & ≥5	+	17	40	10	2
NC & ≥10	+	14	35	9	2

236

Graphs represent the objective compilation of available data for specified areas without regard to sus
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias

V

WIND SPEED (KNOTS)

VSBY	0-3	4-10	11-21	22-33	≥34
R <.5	+	+	+	+	+
OR <2	+	+	+	+	+
BY <2	+	+	+	+	+
OR <2	+	+	1	1	1
R <5	+	2	7	7	2
BY ≥5	2	19	47	26	3
& ≥5	2	12	26	11	1
≥10	1	11	23	9	1

3962

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	+	+
<6 & OR <2	+	+	1	+	1
VSBY <2	+	+	1	+	1
<10 & OR <2	+	+	1	1	1
<20 & OR <5	+	1	7	9	6
VSBY ≥5	2	11	35	30	10
≥50 & ≥5	2	8	21	14	5
NC & ≥10	2	6	17	9	2

1191

1

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	22	44	0
<20 & OR <5	0	0	33	44	0
VSBY ≥5	0	11	33	33	0
≥50 & ≥5	0	11	11	0	0
NC & ≥10	0	11	0	0	0

9

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	3	2
<6 & OR <2	0	1	5	6	5
VSBY <2	0	1	4	4	5
<10 & OR <2	1	2	9	8	7
<20 & OR <5	1	4	24	24	11
VSBY ≥5	2	11	30	19	4
≥50 & ≥5	1	5	9	4	0
NC & ≥10	1	5	7	1	0

358

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	3	1	1	1
<6 & OR <2	1	5	6	4	4
VSBY <2	+	4	5	4	3
<10 & OR <2	1	5	8	5	4
<20 & OR <5	2	10	18	10	6
VSBY ≥5	5	17	32	12	3
≥50 & ≥5	3	6	13	5	1
NC & ≥10	2	5	8	4	+

421

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	1	2	3	3	1
VSBY <2	1	1	3	2	1
<10 & OR <2	1	2	4	4	2
<20 & OR <5	2	3	8	7	4
VSBY ≥5	7	22	36	17	3
≥50 & ≥5	4	17	26	11	1
NC & ≥10	3	15	22	9	1

598

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	1
<6 & OR <2	0	+	2	3	3
VSBY <2	0	+	1	3	2
<10 & OR <2	0	1	4	6	4
<20 & OR <5	1	7	22	12	7
VSBY ≥5	3	18	41	15	6
≥50 & ≥5	2	8	10	3	1
NC & ≥10	1	3	5	2	+

440

9

WIND SPEED (KNOTS)

VSBY	0-3	4-10	11-21	22-33	≥34
<.5	0	1	4	4	+
<2	0	1	7	6	1
<2	0	1	4	3	1
<2	0	2	8	7	1
<5	1	5	17	13	2
≥5	2	16	39	21	3
≥5	1	8	12	6	1
≥10	1	7	10	5	1

447

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	1	1	2
<6 & OR <2	0	1	3	4	4
VSBY <2	0	1	2	3	4
<10 & OR <2	0	2	5	7	6
<20 & OR <5	0	5	13	18	12
VSBY ≥5	1	10	29	27	12
≥50 & ≥5	+	4	11	7	3
NC & ≥10	+	2	5	2	1

1330

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	5	5	4
VSBY <2	+	1	2	3	3
<10 & OR <2	+	5	11	12	6
<20 & OR <5	+	9	21	21	9
VSBY ≥5	1	15	30	23	6
≥50 & ≥5	1	6	13	9	2
NC & ≥10	+	4	9	6	1

1802

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	2	2
<6 & OR <2	+	1	4	6	4
VSBY <2	+	1	1	3	3
<10 & OR <2	+	4	10	12	6
<20 & OR <5	1	7	19	21	9
VSBY ≥5	1	14	33	24	6
≥50 & ≥5	1	6	15	9	1
NC & ≥10	+	4	11	5	1

1316

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	3	2	1
<6 & OR <2	+	3	5	5	3
VSBY <2	+	2	3	2	2
<10 & OR <2	+	6	11	11	5
<20 & OR <5	1	8	21	20	8
VSBY ≥5	2	14	31	23	6
≥50 & ≥5	1	8	15	9	3
NC & ≥10	1	6	11	6	1

1253

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	4	5	3
VSBY <2	+	1	2	2	2
<10 & OR <2	+	3	9	9	4
<20 & OR <5	+	7	20	18	7
VSBY ≥5	1	10	36	27	8
≥50 & ≥5	+	4	14	9	2
NC & ≥10	+	4	10	6	1

2152

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	0	0	0
<6 & OR <2	0	+	+	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	0	1	2	2	+
<20 & OR <5	+	3	9	6	1
VSBY ≥5	5	30	47	15	1
≥50 & ≥5	4	23	30	4	1
NC & ≥10	3	16	23	4	1

847

19

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
<.5	+	+	1	1	+
<2	+	1	3	2	1
<2	+	+	2	1	+
<2	+	3	7	5	2
<5	1	7	19	11	4
≥5	3	18	43	22	5
≥5	1	10	18	7	1
≥10	1	9	16	5	+

1518

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	0
<6 & OR <2	0	1	2	2	1
VSBY <2	0	0	+	0	+
<10 & OR <2	0	2	3	3	1
<20 & OR <5	+	4	7	6	1
VSBY ≥5	6	28	47	16	2
≥50 & ≥5	5	21	29	6	0
NC & ≥10	4	18	26	5	0

378

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	0	1	3	2	1
VSBY <2	0	+	1	1	+
<10 & OR <2	0	2	8	7	2
<20 & OR <5	+	6	19	13	4
VSBY ≥5	2	21	43	23	5
≥50 & ≥5	1	12	20	8	1
NC & ≥10	1	11	18	7	1

3041

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	+
<6 & OR <2	+	+	2	2	1
VSBY <2	0	+	+	1	+
<10 & OR <2	+	2	7	5	1
<20 & OR <5	+	5	21	13	3
VSBY ≥5	2	18	47	22	4
≥50 & ≥5	1	11	23	9	1
NC & ≥10	1	10	20	7	1

2171

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	1	3	3	2
VSBY <2	+	0	1	1	1
<10 & OR <2	+	3	8	7	3
<20 & OR <5	1	8	21	16	5
VSBY ≥5	2	19	41	23	4
≥50 & ≥5	1	9	19	9	2
NC & ≥10	1	8	16	7	1

1389

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	+
<6 & OR <2	+	2	3	3	1
VSBY <2	+	1	1	1	+
<10 & OR <2	1	5	9	7	2
<20 & OR <5	1	9	21	13	3
VSBY ≥5	2	20	42	23	4
≥50 & ≥5	1	10	19	9	2
NC & ≥10	1	8	16	7	1

1394

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	1	+
<6 & OR <2	+	1	3	3	1
VSBY <2	+	+	1	1	+
<10 & OR <2	1	4	9	6	1
<20 & OR <5	1	10	22	11	2
VSBY ≥5	3	24	45	18	2
≥50 & ≥5	1	12	20	8	1
NC & ≥10	1	11	17	6	+

1752

29

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
<.5	0	+	+	+	0
<2	+	1	2	1	+
<2	+	+	1	+	+
<2	+	3	8	4	1
<5	+	7	22	11	2
≥5	1	22	51	15	1
≥5	1	14	25	4	+
≥10	1	12	21	3	+

2473

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	1	1	+
VSBY <2	0	0	+	0	0
<10 & OR <2	+	3	6	3	1
<20 & OR <5	+	7	14	7	1
VSBY ≥5	3	26	50	16	3
≥50 & ≥5	3	17	30	6	1
NC & ≥10	2	16	27	5	1

1502

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	5	1	+
<20 & OR <5	+	4	11	3	+
VSBY ≥5	3	27	55	12	1
≥50 & ≥5	3	21	39	8	+
NC & ≥10	3	20	37	7	0

1919

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	+	1	+	+
VSBY <2	0	+	+	0	0
<10 & OR <2	+	2	5	2	+
<20 & OR <5	+	5	13	4	+
VSBY ≥5	4	26	56	12	+
≥50 & ≥5	4	20	37	7	+
NC & ≥10	4	19	35	7	+

4016

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	+	+	+	0
<10 & OR <2	+	2	5	1	0
<20 & OR <5	+	5	12	3	+
VSBY ≥5	4	30	56	9	1
≥50 & ≥5	3	21	33	3	0
NC & ≥10	3	20	31	3	0

1645

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	1	2	2	1
VSBY <2	+	+	1	1	+
<10 & OR <2	+	2	7	5	1
<20 & OR <5	+	6	16	9	1
VSBY ≥5	2	23	51	14	1
≥50 & ≥5	1	18	35	7	+
NC & ≥10	1	15	28	4	+

5194

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	+
<6 & OR <2	+	+	1	3	2
VSBY <2	0	+	+	1	1
<10 & OR <2	+	1	5	9	4
<20 & OR <5	+	2	12	19	6
VSBY ≥5	1	9	36	35	6
≥50 & ≥5	1	7	25	19	2
NC & ≥10	1	6	20	13	1

6128

39

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
<.5	0	0	+	0	0
<2	0	0	1	0	0
<2	0	0	+	0	0
<2	0	+	5	1	0
<5	+	4	11	2	0
≥5	10	31	45	11	+
≥5	10	26	32	8	+
≥10	9	23	28	6	+

547

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	+	+	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	0	1	2	1	0
<20 & OR <5	+	2	10	2	+
VSBY ≥5	3	23	63	10	1
≥50 & ≥5	3	19	47	7	1
NC & ≥10	3	18	46	6	1

568

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	1	1	1	0
VSBY <2	0	1	+	+	0
<10 & OR <2	0	2	7	2	0
<20 & OR <5	+	3	19	5	0
VSBY ≥5	1	20	59	14	2
≥50 & ≥5	+	17	40	10	2
NC & ≥10	+	14	35	9	2

236

42

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	0	0
<6 & OR <2	0	1	2	1	0
VSBY <2	0	0	1	0	0
<10 & OR <2	+	4	13	1	0
<20 & OR <5	1	7	28	4	+
VSBY ≥5	1	23	66	8	+
≥50 & ≥5	1	14	31	3	0
NC & ≥10	1	13	28	3	0

779

43

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	+	+	+	+	0
VSBY <2	0	0	0	+	0
<10 & OR <2	+	3	4	+	+
<20 & OR <5	1	7	8	1	+
VSBY ≥5	9	59	30	1	+
≥50 & ≥5	9	50	20	+	+
NC & ≥10	8	48	20	0	+

856

44

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	0
<6 & OR <2	+	2	2	+	0
VSBY <2	+	1	1	+	0
<10 & OR <2	1	5	5	1	0
<20 & OR <5	2	13	10	1	0
VSBY ≥5	16	47	29	2	0
≥50 & ≥5	13	33	18	1	0
NC & ≥10	11	29	15	+	0

2370

45

WIND SPEED (KNOTS)

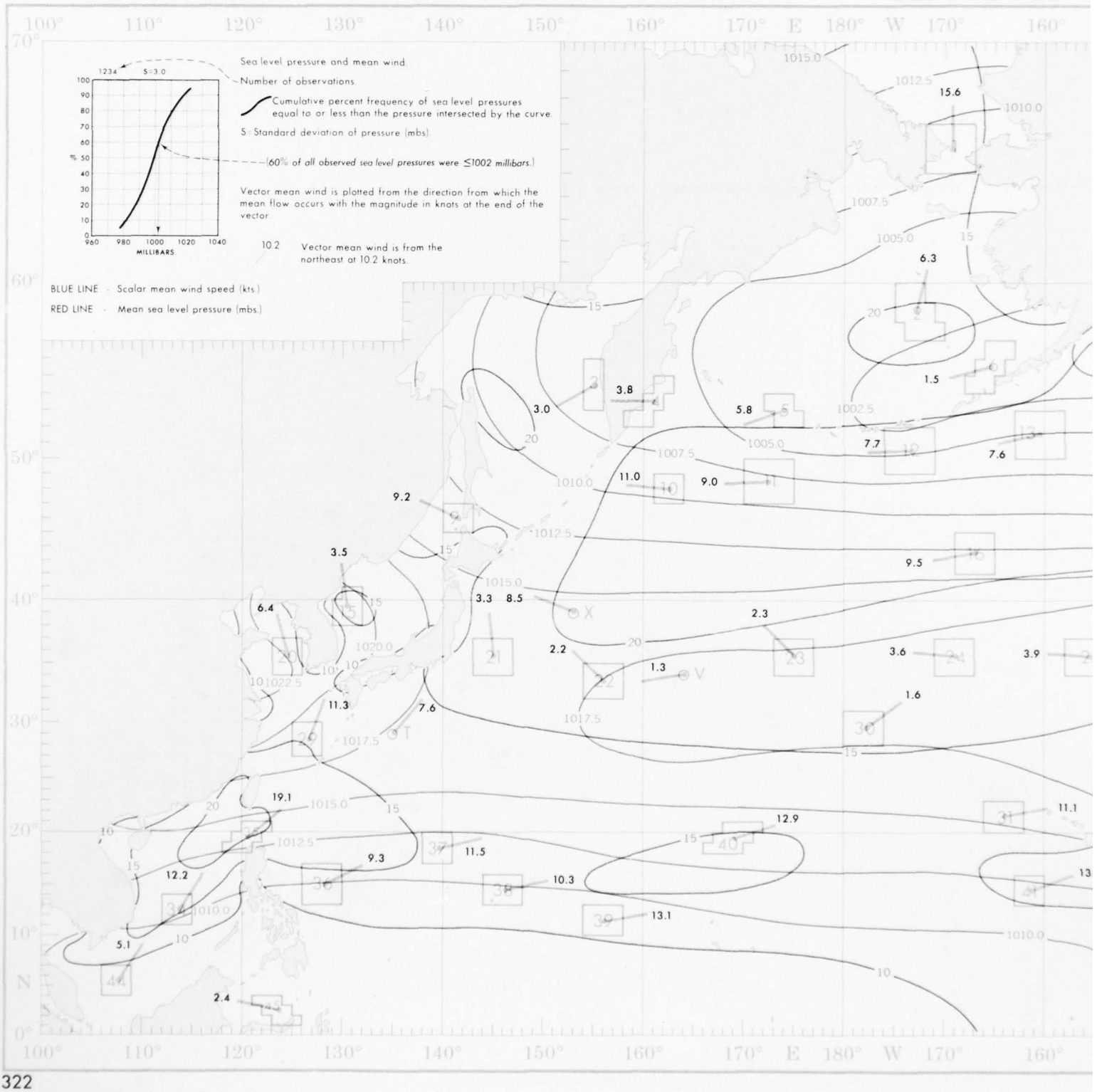
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	1	1	0	0
<20 & OR <5	0	7	7	1	0
VSBY ≥5	19	53	24	1	0
≥50 & ≥5	17	45	13	0	0
NC & ≥10	16	43	12	0	0

75

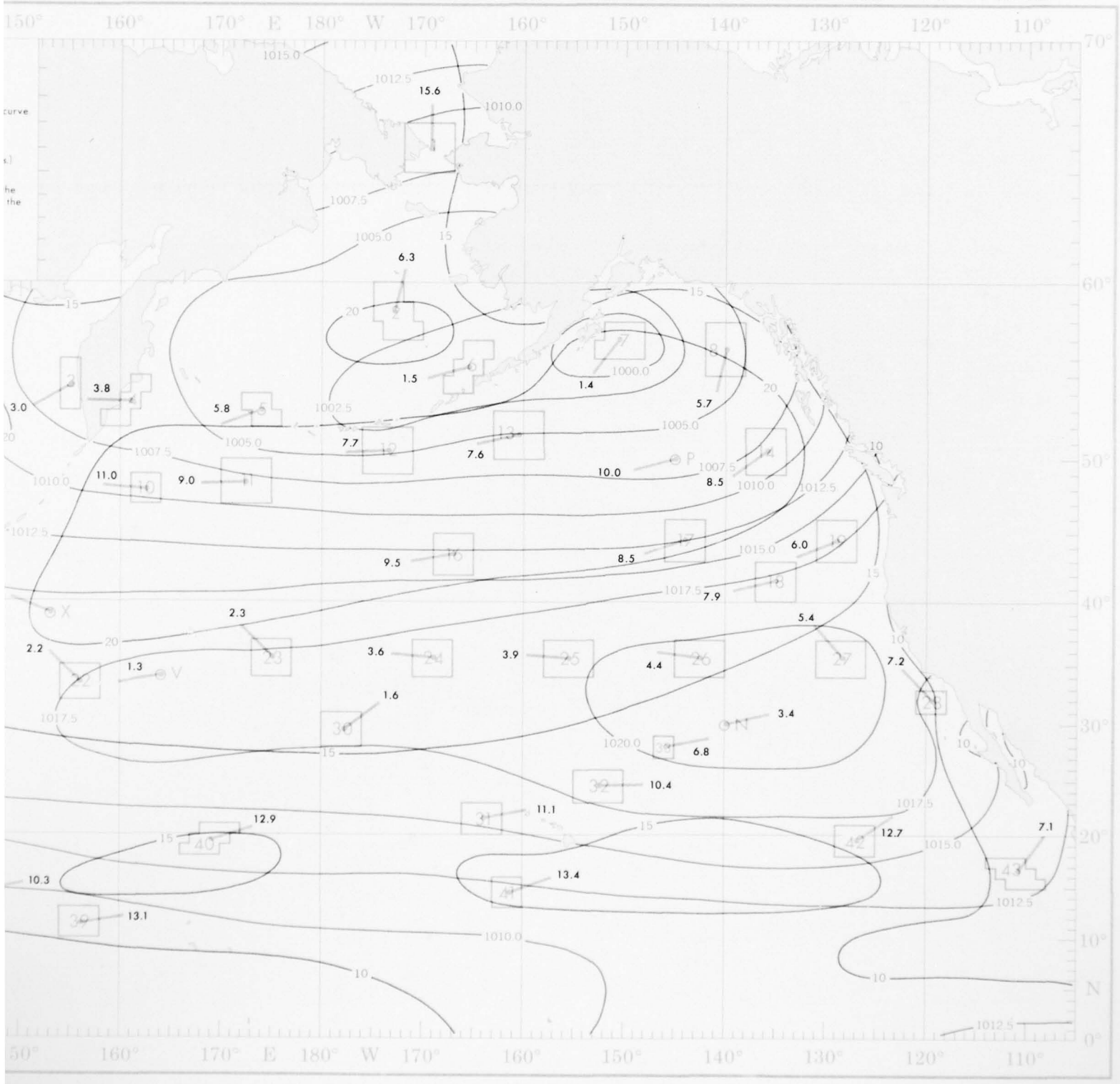
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alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

NOVEMBER

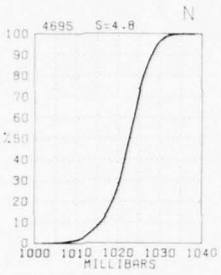
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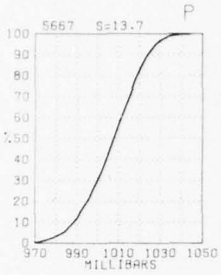


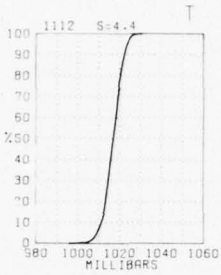
SEA LEVEL PRESSURE AND MEAN WIND

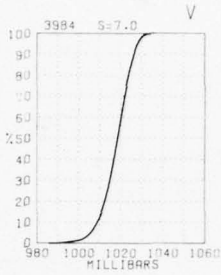


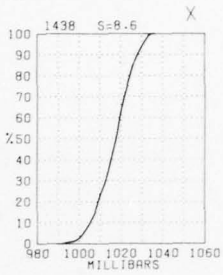
SEA LEVEL PRESSURE



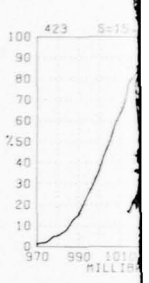


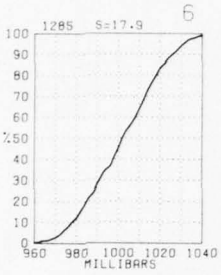


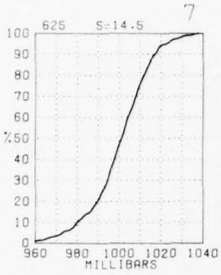


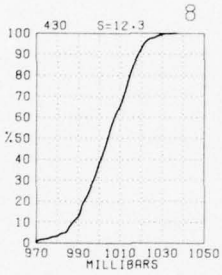


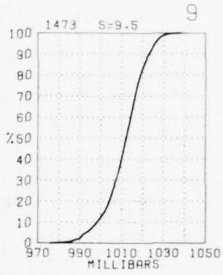
INSUFFICIENT DATA

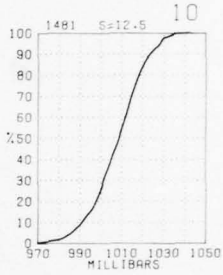


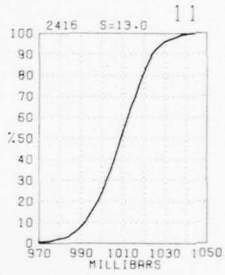


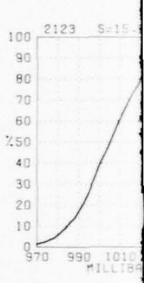


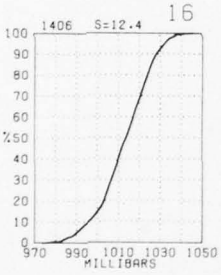


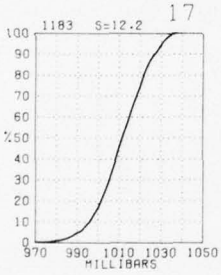


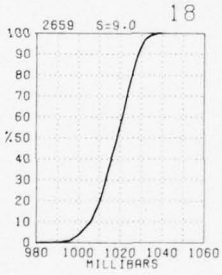


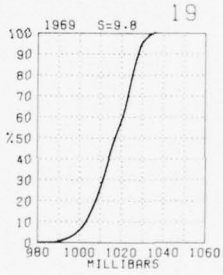


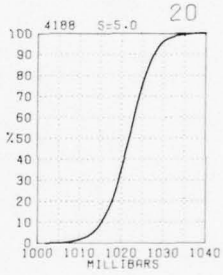


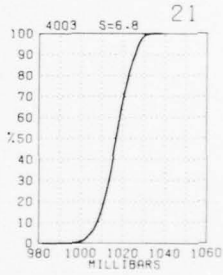


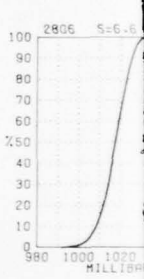


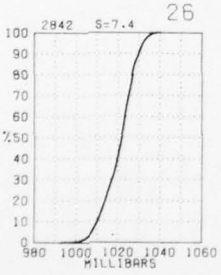


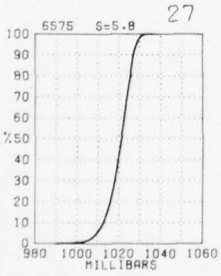


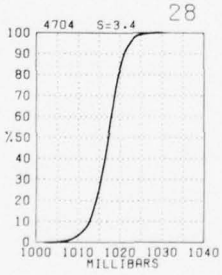


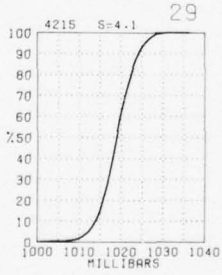


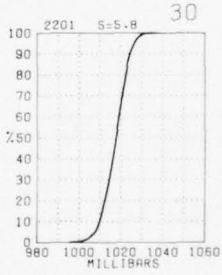


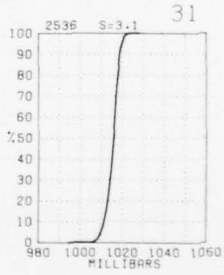


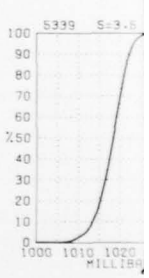


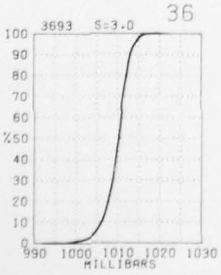


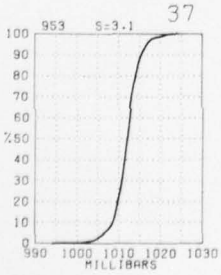


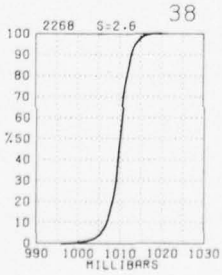


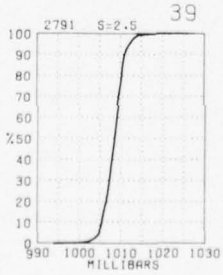


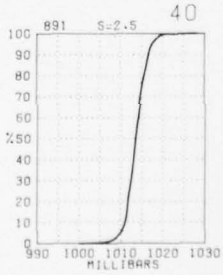


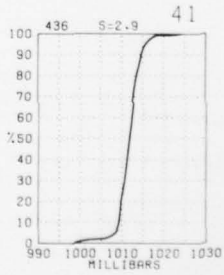


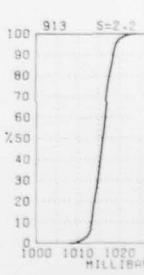






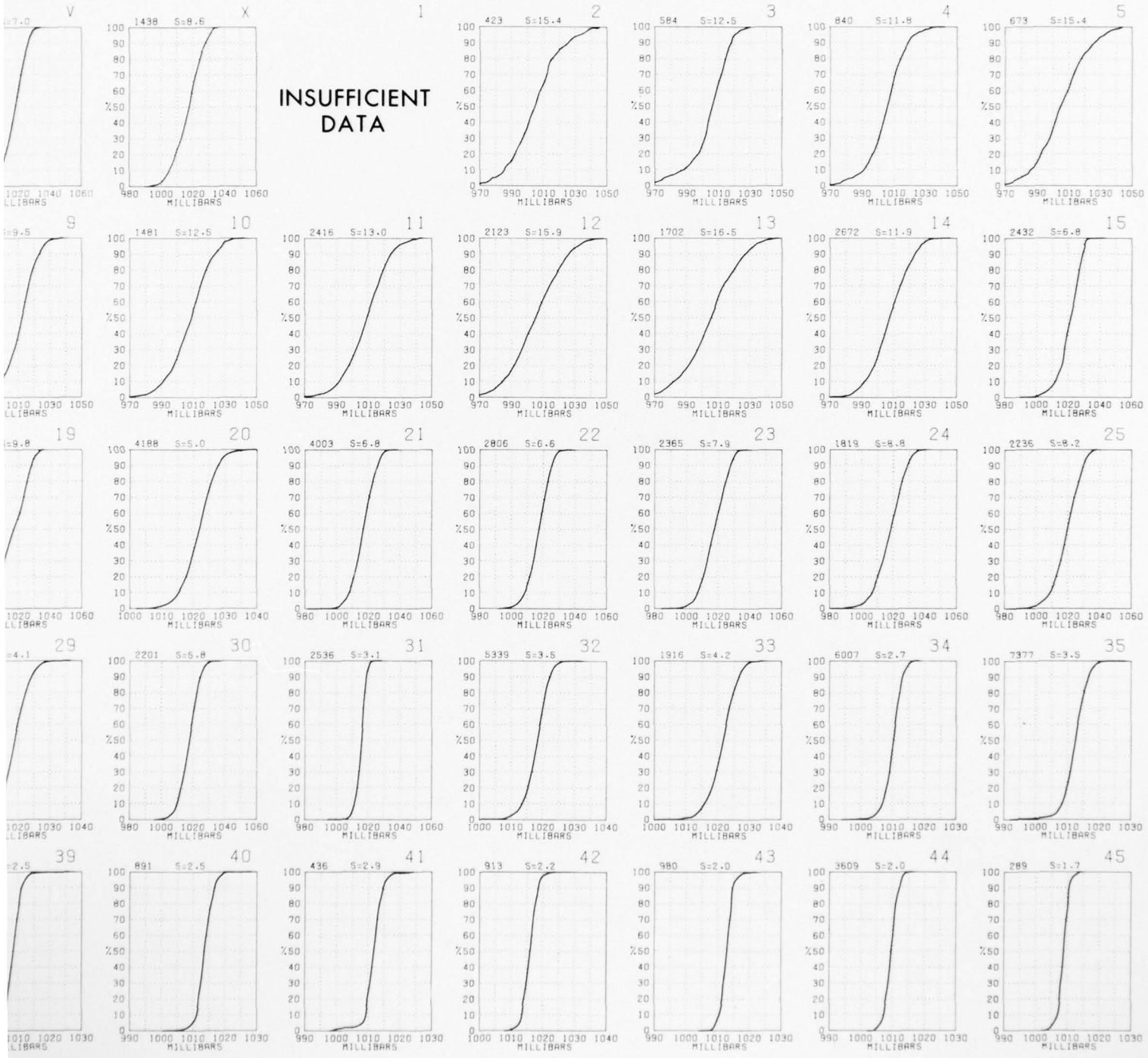






Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

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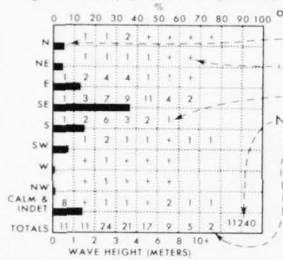
e objective compilation of available data for specified areas without regard to suspected biases.
s (opposite page) are based on all available data subjectively adjusted where bias was evident.

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Wave direction and height

Direction frequency (top scale): Bars represent percent frequency of waves from each direction.

Height frequency (bottom scale): Printed figures represent percent frequency of wave heights observed from each direction.



– – – (5% of all waves were from the N.)

+ indicates < 5% but >0

– – – (1% of all waves were from the S with heights from 6-7.5 meters.)

Number of observations.

– (2% of the waves from all directions had heights ≥10 meters.)

WAVE HEIGHT INTERVAL

Feet	0-2	3-6	7-9	10-12	13-19	20-25	26-32	≥33
Meters	0-.5	1-1.5	2-2.5	3-3.5	4-5.5	6-7.5	8-9.5	≥10

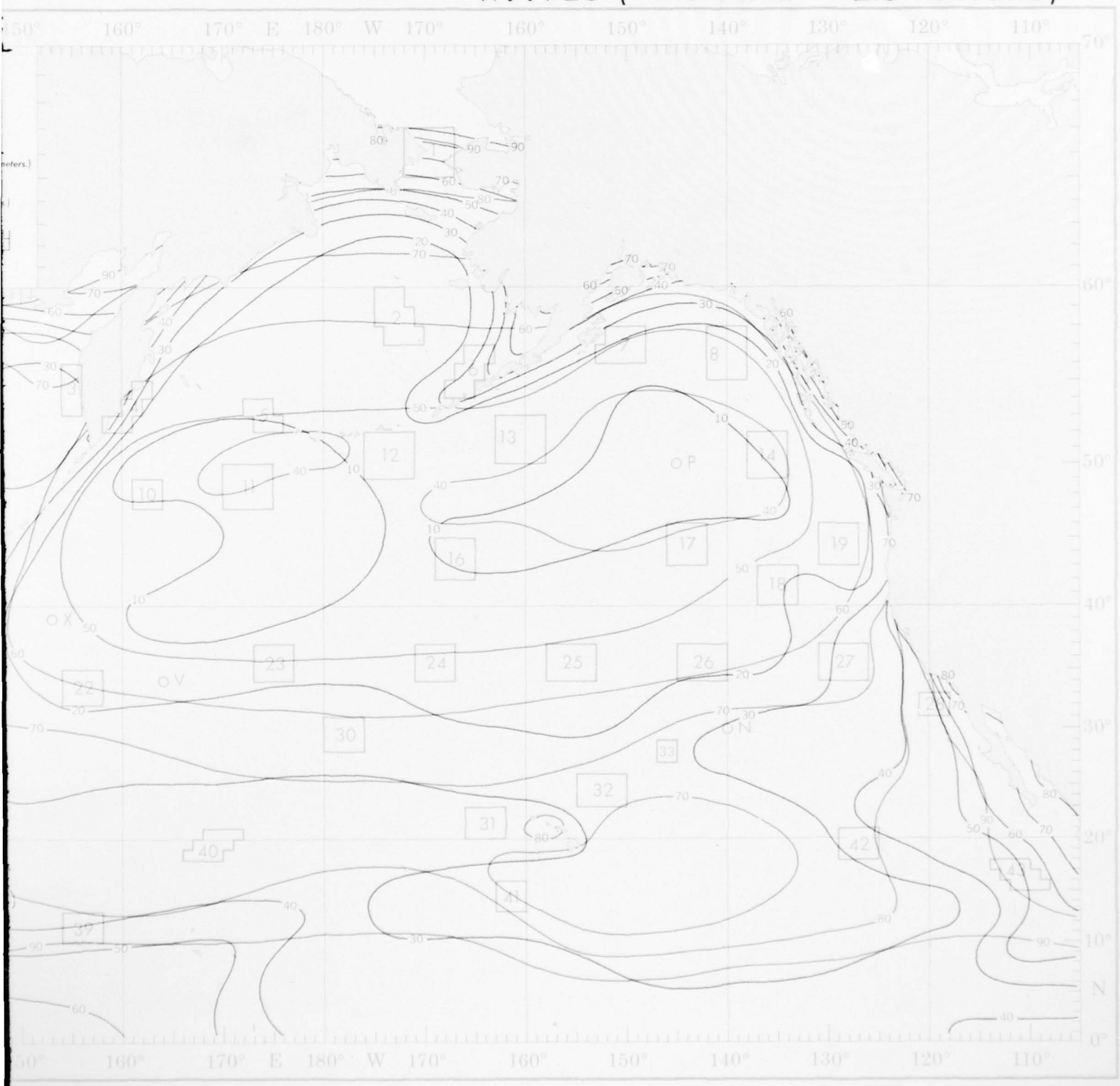
0 1 2 3 4 6 8 10+

Printed scale on bottom of chart

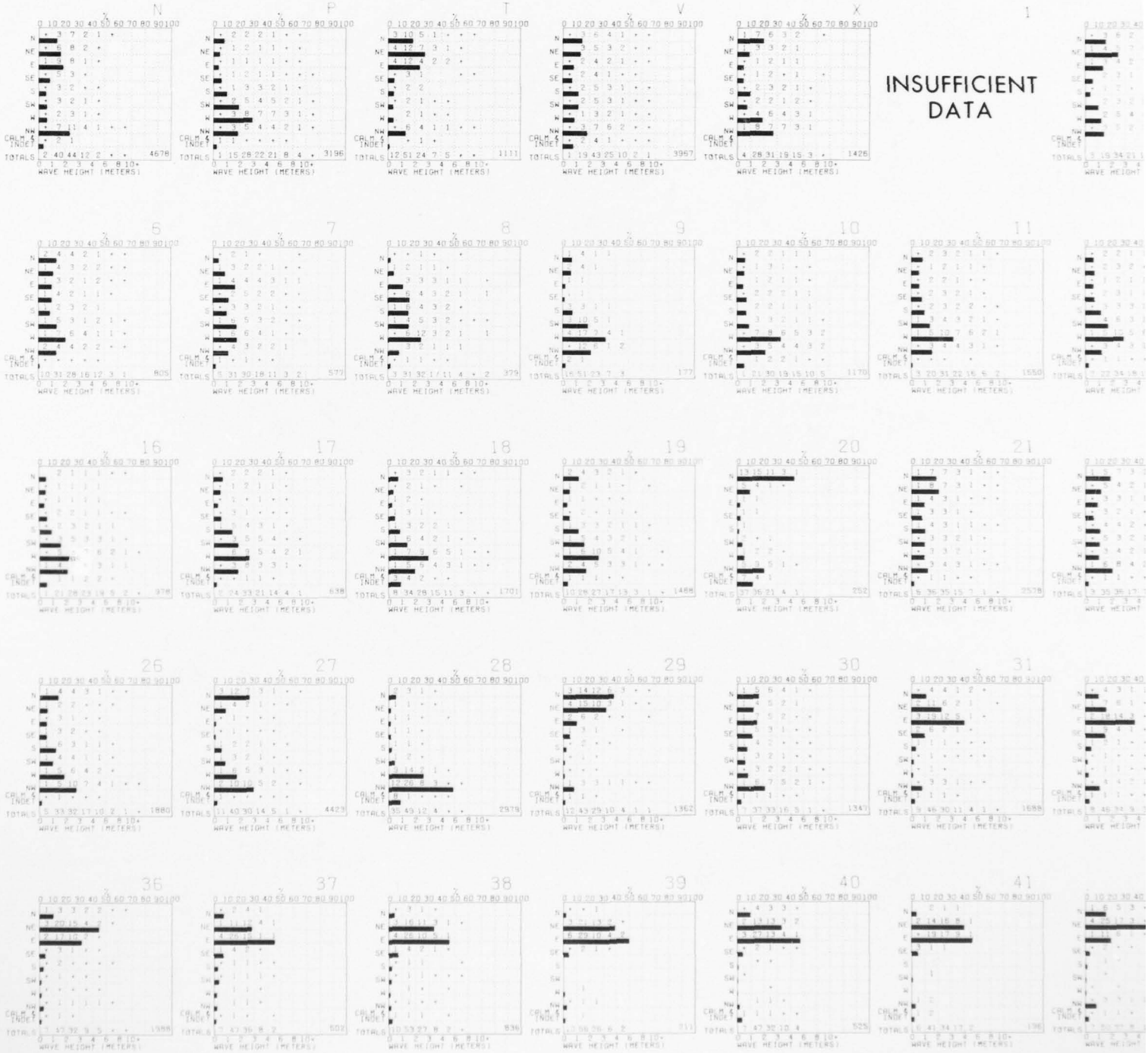
BLUE LINE - Percent frequency of wave height <1.5 meters (5 feet)

RED LINE - Percent frequency of wave height <2.5 meters (8 feet)

WAVES (<1.5 AND <2.5 METERS)



WAVE DIRECTION AND HEIGHT

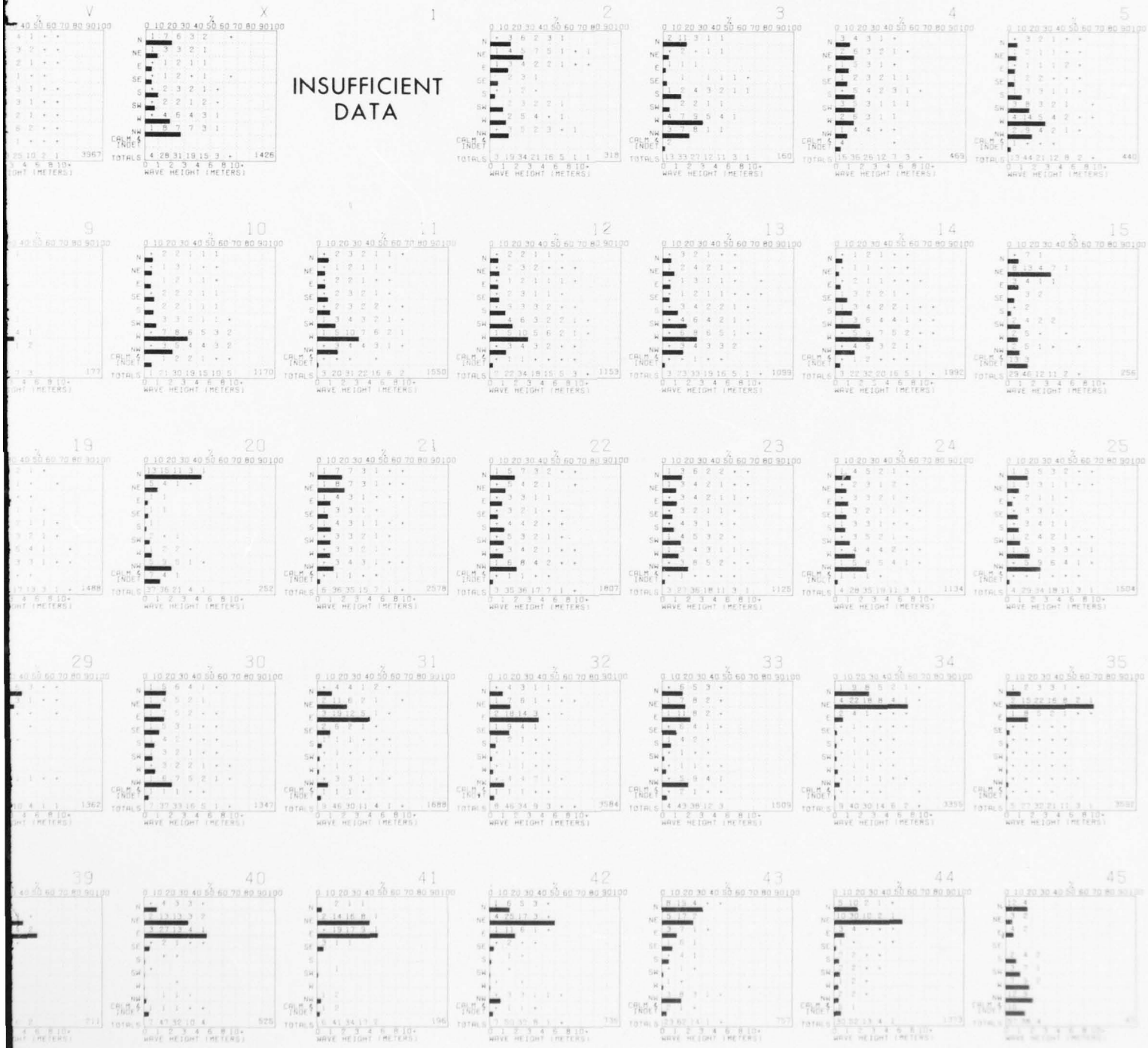


Graphs represent the objective compilation of available data for specified areas without regard
The isopleth analyses (opposite page) are based on all available data subjectively adjusted whe

GHT

NOVEMBER

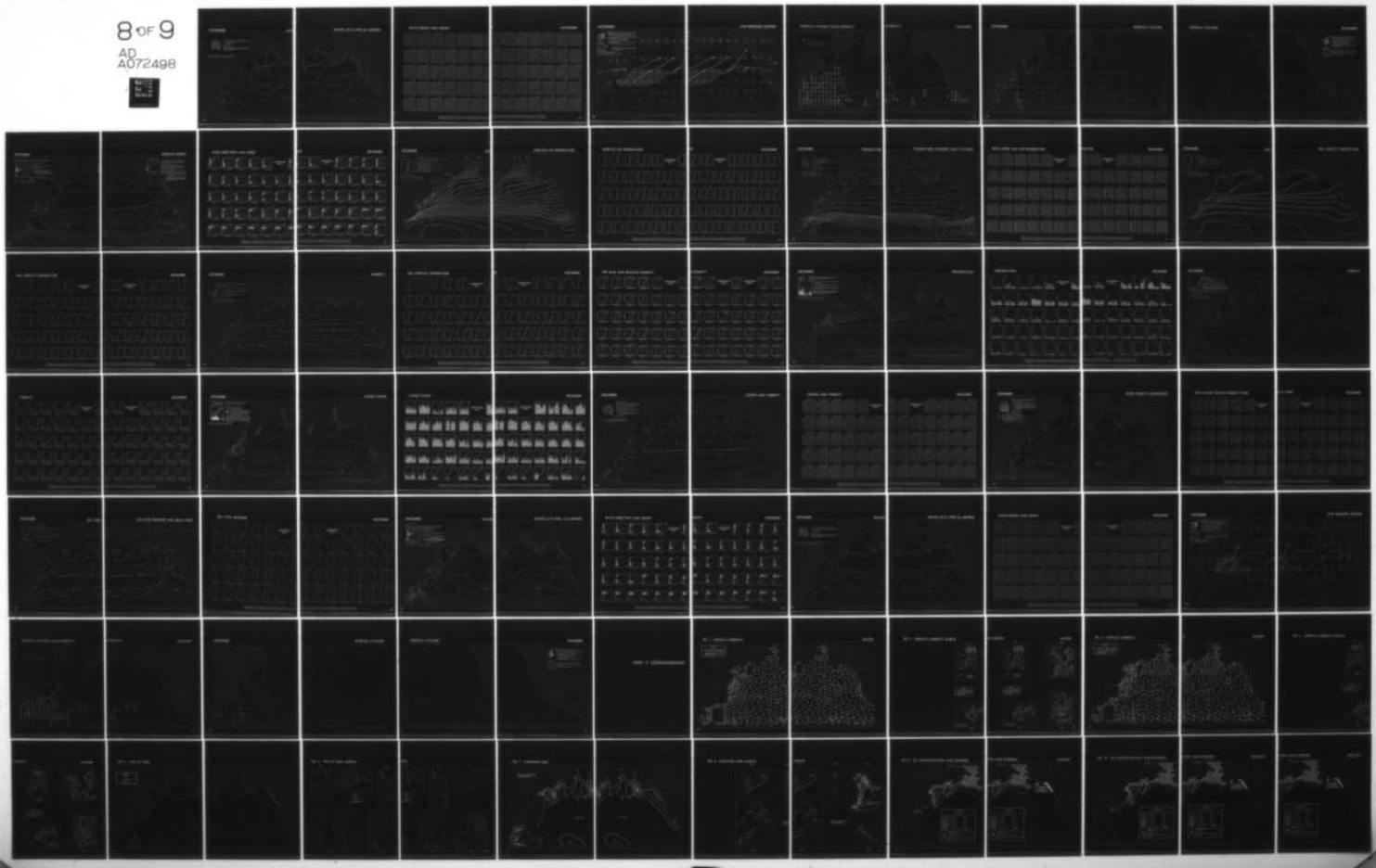
INSUFFICIENT DATA

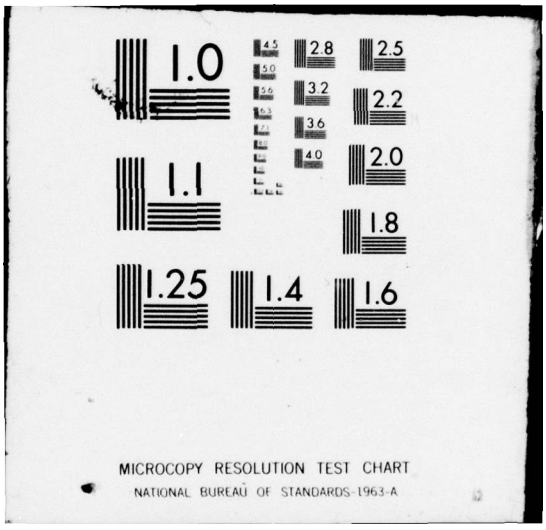


he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

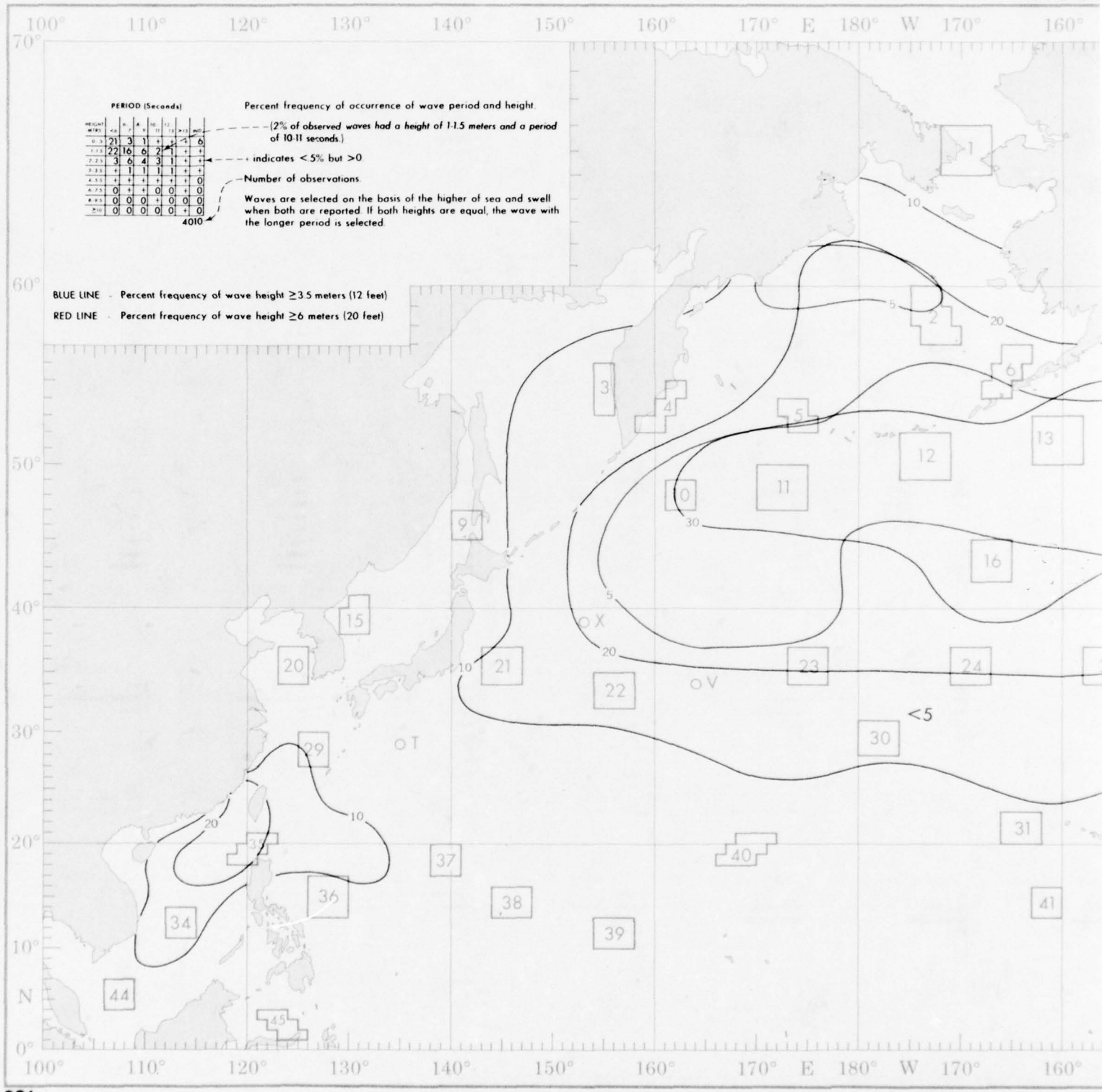
AD-A072 498 NAVAL AIR SYSTEMS COMMAND WASHINGTON DC F/G 4/2
U. S. NAVY MARINE CLIMATIC ATLAS OF THE WORLD. VOLUME II. NORTH--ETC(U)
MAR 77
UNCLASSIFIED NAVAIR-50-1C-529 NL

8 OF 9
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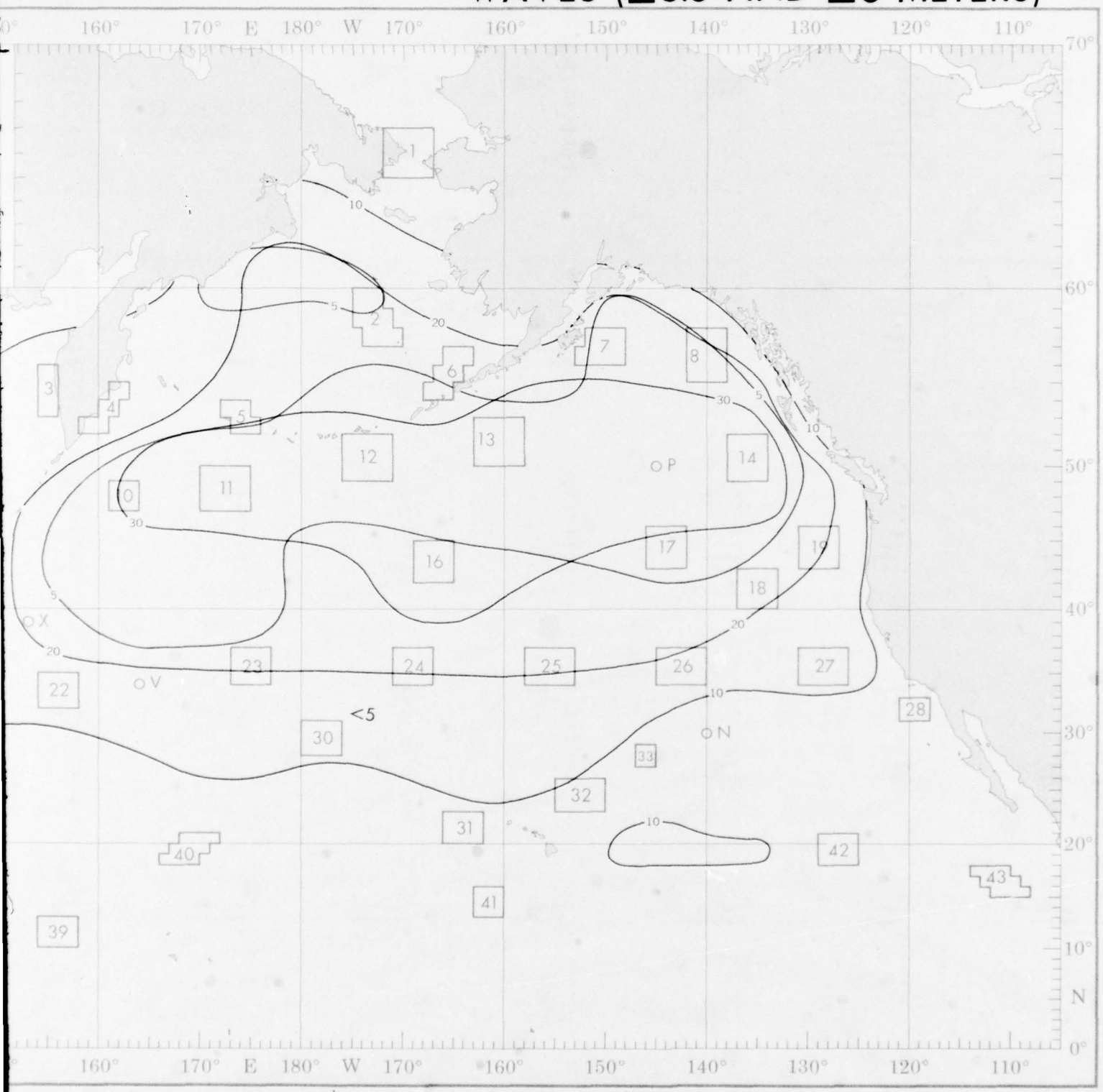



1.0
1.1
1.25
1.4
1.6
1.8
2.0
2.2
2.5
2.8
3.2
3.6
4.0
4.5
5.0
5.6
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

NOVEMBER


PERIOD (Seconds)
HEIGHT (METERS)
<5
5-7
8-9
10-11
12-13
>13
0-1.5
1.5-3
3-4.5
4.5-6
6-7.5
7.5-9
9-10
>10
21 3 1 + + 6
22 16 6 2 1 + +
3 6 4 3 1 + +
+ 1 1 1 1 + +
+ + + + + + 0
0 + + 0 0 + 0
0 0 0 + 0 0 0
0 0 0 0 0 + 0
4010
Percent frequency of occurrence of wave period and height.
(2% of observed waves had a height of 1-1.5 meters and a period of 10-11 seconds.)
+ indicates < 5% but >0
Number of observations.
Waves are selected on the basis of the higher of sea and swell when both are reported. If both heights are equal, the wave with the longer period is selected.
BLUE LINE - Percent frequency of wave height ≥3.5 meters (12 feet)
RED LINE - Percent frequency of wave height ≥6 meters (20 feet)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°
1 2 3 4 5 6 9 10 11 12 13 15 16 20 21 22 23 24 29 30 31 34 36 37 38 39 40 41 44 45
10 5 20 30 <5
X V T

WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	9	18	7	2	1	0	2
2-2.5	4	17	14	6	1	+	1
3-3.5	+	3	4	3	1	1	0
4-5.5	+	+	1	1	+	+	0
6-7.5	0	0	0	+	+	+	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

4680

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	0	0	0	0	1
1-1.5	4	7	1	1	+	+	1
2-2.5	1	13	8	4	2	+	+
3-3.5	+	7	8	4	1	1	+
4-5.5	+	3	10	6	2	1	+
6-7.5	0	+	3	3	1	+	+
8-9.5	0	+	1	1	1	+	+
≥10	0	0	+	+	+	+	0

3196

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	4	5	0	0	0	4
1-1.5	+	15	17	1	0	0	18
2-2.5	+	7	11	2	0	0	4
3-3.5	+	3	3	1	0	0	+
4-5.5	0	1	3	1	0	0	0
6-7.5	0	+	+	+	0	0	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	0	0	0

1112

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	+
1-1.5	4	10	3	+	+	+	2
2-2.5	3	19	14	3	+	+	4
3-3.5	+	6	13	3	1	0	1
4-5.5	0	1	5	2	1	+	+
6-7.5	0	+	1	+	+	+	+
8-9.5	0	0	+	+	+	+	+
≥10	0	0	0	0	0	0	0

3967

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	1	2	0	0	0	1
1-1.5	0	2	9	+	0	0	16
2-2.5	0	1	14	2	0	0	14
3-3.5	0	1	10	3	+	0	5
4-5.5	0	1	8	6	+	0	+
6-7.5	0	0	1	2	0	0	0
8-9.5	0	0	0	0	+	0	0
≥10	0	0	0	0	0	0	0

1426

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	100	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	17	8	2	+	+	1	2
2-2.5	11	10	3	1	+	+	2
3-3.5	2	8	4	+	+	+	1
4-5.5	1	5	5	1	+	0	+
6-7.5	0	1	1	+	+	0	+
8-9.5	0	+	0	+	+	+	0
≥10	0	0	0	0	0	0	0

820

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	0	0	0	1
1-1.5	15	7	2	+	1	0	4
2-2.5	7	10	6	1	+	1	4
3-3.5	2	5	5	1	1	0	3
4-5.5	1	2	4	2	1	1	1
6-7.5	0	+	1	1	+	+	+
8-9.5	0	+	1	+	0	1	0
≥10	0	0	0	0	0	0	0

583

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	+	+	0	0	1
1-1.5	15	9	2	1	1	1	1
2-2.5	4	14	8	2	2	2	1
3-3.5	2	7	4	2	1	1	+
4-5.5	2	2	2	2	1	1	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	+	0
≥10	0	0	1	0	0	+	1

380

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	0	0	0	0	11
1-1.5	19	4	1	0	0	0	28
2-2.5	5	4	2	0	0	0	12
3-3.5	2	1	1	0	0	0	3
4-5.5	1	0	0	0	0	0	2
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

177

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	0	+	+	0	0	+
1-1.5	5	13	2	+	+	0	1
2-2.5	1	15	9	3	+	+	2
3-3.5	+	5	7	3	1	1	2
4-5.5	+	2	6	3	1	1	1
6-7.5	0	1	4	2	1	2	+
8-9.5	0	0	2	2	0	1	+
≥10	0	0	0	0	0	0	0

1171

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	+	+	0	0	1
1-1.5	6	10	3	1	+	0	+
2-2.5	2	9	12	5	1	+	+
3-3.5	1	6	6	4	3	1	+
4-5.5	+	3	6	4	2	1	+
6-7.5	0	1	2	2	1	1	+
8-9.5	0	+	+	+	+	+	+
≥10	0	0	0	0	0	0	0

1558

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	+	0	0	0
1-1.5	6	8	4	2	+	+	1
2-2.5	3	7	11	5	1	1	1
3-3.5	1	6	6	5	2	1	2
4-5.5	+	3	5	5	3	2	2
6-7.5	0	1	1	1	1	1	+
8-9.5	0	0	+	1	1	+	0
≥10	0	0	+	0	0	0	0

978

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	+	0	+	0	0	+
1-1.5	9	9	3	1	1	0	1
2-2.5	4	10	9	7	1	1	+
3-3.5	1	5	5	5	3	1	1
4-5.5	+	3	4	5	1	1	+
6-7.5	0	1	1	1	1	1	0
8-9.5	0	+	+	0	0	1	0
≥10	0	0	0	0	0	0	0

639

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+	+	0	0	3
1-1.5	16	9	3	1	+	+	4
2-2.5	6	8	7	4	1	+	2
3-3.5	1	4	5	3	1	+	+
4-5.5	1	2	3	3	1	+	+
6-7.5	0	+	+	1	+	+	+
8-9.5	0	0	+	+	0	0	0
≥10	0	0	0	+	0	0	0

1714

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	1	1
1-1.5	9	10	6	1	+	+	1
2-2.5	4	7	8	6	1	+	1
3-3.5	1	3	7	3	2	1	+
4-5.5	1	2	4	4	2	1	+
6-7.5	0	1	1	1	1	1	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	+	+	0	0

1500

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	31	+	0	0	0	0	7
1-1.5	23	7	+	0	0	0	4
2-2.5	2	15	2	0	0	+	2
3-3.5	0	2	+	1	+	0	+
4-5.5	0	+	0	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

260

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	1
1-1.5	15	14	5	1	+	+	1
2-2.5	5	12	11	4	1	+	1
3-3.5	1	4	5	3	1	+	+
4-5.5	+	1	3	2	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	0	0	0

2600

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	+	+	+	+	0	1
1-1.5	14	12	4	1	+	+	1
2-2.5	4	11	11	4	1	+	1
3-3.5	2	3	6	3	2	1	+
4-5.5	+	1	4	2	1	1	+
6-7.5	0	+	+	1	+	+	0
8-9.5	0	0	+	+	0	0	0
≥10	0	0	+	0	0	0	0

1904

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	1	+	0	0	2
1-1.5	16	12	6	2	1	+	1
2-2.5	4	9	9	4	1	1	1
3-3.5	1	3	4	3	1	1	+
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

4521

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	23	3	2	1	0	0	8
1-1.5	27	13	4	2	1	+	1
2-2.5	3	4	2	1	+	+	+
3-3.5	1	1	1	+	+	+	+
4-5.5	+	+	+	+	+	+	0
6-7.5	0	0	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

3043

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	1
1-1.5	20	16	3	1	+	0	1
2-2.5	4	12	10	2	+	+	1
3-3.5	1	2	2	4	1	1	0
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	0	+	0	+	+
≥10	0	0	0	0	0	0	0

1382

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	+	+	0	0	1
1-1.5	17	12	5	2	+	+	1
2-2.5	4	10	10	5	1	1	1
3-3.5	1	3	5	4	2	1	+
4-5.5	1	1	1	1	1	1	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	+	+	0
≥10	0	0	0	0	0	0	0

1369

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	1
1-1.5	21	14	6	2	1	+	2
2-2.5	4	10	9	4	1	1	1
3-3.5	1	3	3	2	1	+	+
4-5.5	+	1	1	1	1	+	0
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	0	0	+	0
≥10	0	0	0	0	0	0	0

1715

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	1
1-1.5	16	21	7	2	+	+	1
2-2.5	3	9	14	5	1	+	+
3-3.5	+	1	4	2	1	+	+
4-5.5	+	1	2	1	1	1	+
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	0	+	0	+	0
≥10	0	0	0	0	0	0	0

2000

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	0	0	0	0	+
1-1.5	20	19	5	1	1	0	1
2-2.5	5	12	11	4	2	+	1
3-3.5	1	1	2	2	1	1	0
4-5.5	+	1	+	0	+	0	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

510

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	9	1	+	+	0	0	1
1-1.5	24	18	6	2	1	+	1
2-2.5	3	9	9	3	1	+	1
3-3.5	+	3	2	2	+	+	+
4-5.5	+	+	1	1	+	+	0
6-7.5	0	0	0	+	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

848

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	0	0	0	0	1
1-1.5	28	18	6	+	1	0	2
2-2.5	4	10	8	3	+	0	0
3-3.5	0	1	2	1	+	1	0
4-5.5	0	+	1	+	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

216

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	+	+	0	0	2
1-1.5	23	14	5	2	2	+	1
2-2.5	7	9	11	2	1	1	1
3-3.5	1	2	4	3	1	0	+
4-5.5	+	0	1	2	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

532

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	0	0	0	0	1
1-1.5	18	14	5	3	0	0	2
2-2.5	6	15	9	4	1	0	0
3-3.5	2	7	3	2	3	1	1
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

197

Graphs represent the objective compilation of available data for specified areas without re
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

T

NOVEMBER

V

PERIOD (SECONDS)						
7	8- 9	10- 11	12- 13	>13	IND	
*	*	*	0	0	*	
10	3	*	*	*	2	
19	14	3	*	*	4	
6	13	3	1	0	1	
1	5	2	1	*	*	
0	1	*	*	*	*	
0	0	0	0	0	0	

3967

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	0	1	2	0	0	0	1
1-1.5	0	2	9	*	0	0	16
2-2.5	0	1	14	2	0	0	14
3-3.5	0	1	10	3	*	0	6
4-5.5	0	1	8	6	*	0	*
6-7.5	0	0	1	2	0	0	0
8-9.5	0	0	0	0	*	0	0
≥10	0	0	0	0	0	0	0

1426

1

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	100	0	0	0	0	0	0
1-1.5	0	0	0	0	0	0	0
2-2.5	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1

2

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	0	0	0	0	0	0
1-1.5	5	1	8	2	0	*	2
2-2.5	11	7	12	1	0	0	3
3-3.5	6	2	9	2	0	0	2
4-5.5	3	2	8	2	0	0	1
6-7.5	0	2	0	1	0	3	0
8-9.5	0	1	0	0	0	*	0
≥10	0	0	0	0	0	1	0

322

3

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	2	1	0	0	0	6
1-1.5	11	12	4	1	1	0	4
2-2.5	9	9	7	0	1	0	1
3-3.5	1	4	4	0	0	0	2
4-5.5	1	1	6	1	0	0	2
6-7.5	0	0	1	1	1	1	0
8-9.5	0	0	0	0	0	1	1
≥10	0	0	0	0	0	0	0

163

4

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	11	1	0	*	0	0	8
1-1.5	17	8	1	*	*	*	8
2-2.5	8	5	3	*	1	1	8
3-3.5	2	3	3	1	*	1	2
4-5.5	1	2	2	*	*	*	1
6-7.5	0	*	*	*	1	0	1
8-9.5	0	0	*	0	0	0	0
≥10	0	0	0	0	0	0	0

493

5

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	7	*	*	0	0	0	6
1-1.5	16	5	2	*	1	0	20
2-2.5	4	7	4	1	0	0	6
3-3.5	2	2	7	*	*	0	*
4-5.5	1	1	5	*	*	0	1
6-7.5	0	0	*	*	*	*	*
8-9.5	0	0	0	0	0	0	*
≥10	0	0	0	0	0	0	0

443

9

PERIOD (SECONDS)						
7	8- 9	10- 11	12- 13	>13	IND	
1	0	0	0	0	11	
4	1	0	0	0	28	
4	2	0	0	0	12	
1	1	0	0	0	3	
0	0	0	0	0	2	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

177

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	*	0	*	*	0	0	*
1-1.5	5	13	2	*	*	0	1
2-2.5	1	15	9	3	*	*	2
3-3.5	*	5	7	3	1	1	2
4-5.5	*	2	6	3	1	1	1
6-7.5	0	1	4	2	1	2	*
8-9.5	0	0	2	2	0	1	*
≥10	0	0	0	0	0	0	0

1171

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	1	*	*	0	0	1
1-1.5	6	10	3	1	*	0	*
2-2.5	2	9	12	5	1	*	*
3-3.5	1	6	6	4	3	1	*
4-5.5	*	3	6	4	2	1	*
6-7.5	0	1	2	2	1	1	*
8-9.5	0	*	*	*	*	*	*
≥10	0	0	0	0	0	0	0

1558

12

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	2	*	*	*	0	0	*
1-1.5	8	8	4	1	*	*	1
2-2.5	3	10	12	6	2	*	*
3-3.5	1	4	5	4	3	1	*
4-5.5	1	3	4	3	2	2	1
6-7.5	0	1	1	1	1	1	*
8-9.5	0	*	*	1	1	*	0
≥10	0	0	0	0	*	0	0

1160

13

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	*	0	0	0	1
1-1.5	8	11	3	*	*	*	1
2-2.5	5	11	10	5	1	*	1
3-3.5	1	4	5	5	2	2	*
4-5.5	1	2	4	5	1	2	*
6-7.5	0	*	*	2	1	1	*
8-9.5	0	0	*	*	*	*	0
≥10	0	*	0	0	*	0	0

1110

14

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	*	0	0	1
1-1.5	8	6	4	1	1	*	1
2-2.5	4	10	11	4	1	*	3
3-3.5	1	5	8	3	2	1	*
4-5.5	*	4	6	2	2	1	*
6-7.5	0	1	2	1	1	1	*
8-9.5	0	*	1	*	*	0	0
≥10	0	0	*	*	*	0	*

2000

15

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	16	0	0	0	0	0	14
1-1.5	36	6	0	0	0	0	3
2-2.5	3	7	1	0	0	0	*
3-3.5	3	6	2	0	0	0	0
4-5.5	0	*	1	0	0	0	0
6-7.5	0	0	0	0	0	*	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

258

19

PERIOD (SECONDS)						
7	8- 9	10- 11	12- 13	>13	IND	
1	*	*	0	0	1	
10	6	1	*	*	1	
7	8	6	1	*	1	
3	7	3	2	1	*	
2	4	4	2	1	*	
1	*	1	1	1	0	
0	*	*	*	*	0	
0	0	*	*	0	0	

1500

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	31	*	0	0	0	0	7
1-1.5	23	7	*	0	0	0	4
2-2.5	2	15	2	0	0	*	2
3-3.5	0	2	*	1	*	0	*
4-5.5	0	*	0	0	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

260

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	*	*	0	0	1
1-1.5	15	14	5	1	*	*	1
2-2.5	5	12	11	4	1	*	1
3-3.5	1	4	5	3	1	*	*
4-5.5	*	1	3	2	1	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	*	*	*	*	0
≥10	0	0	0	0	0	0	0

2600

22

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	0	0	0	*
1-1.5	14	14	5	1	*	*	1
2-2.5	4	13	13	4	1	*	1
3-3.5	1	5	5	3	2	1	1
4-5.5	*	1	3	2	1	*	*
6-7.5	0	*	0	*	*	*	0
8-9.5	0	0	0	*	*	*	0
≥10	0	0	0	0	0	0	0

1821

23

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	*	0	0	1
1-1.5	10	11	3	1	*	*	*
2-2.5	3	13	10	6	1	1	1
3-3.5	1	4	5	5	2	1	*
4-5.5	1	1	3	2	2	1	*
6-7.5	0	*	*	*	1	1	*
8-9.5	0	*	0	0	*	1	*
≥10	0	0	0	0	0	0	0

1133

24

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	1	0	*	0	0	1
1-1.5	11	11	3	1	*	*	1
2-2.5	3	10	13	6	1	1	1
3-3.5	1	4	6	4	2	1	*
4-5.5	*	2	4	2	1	1	0
6-7.5	0	1	1	1	*	*	*
8-9.5	0	0	*	*	*	0	0
≥10	0	0	0	0	0	0	0

1148

25

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	0	0	0	1
1-1.5	10	12	4	1	1	*	1
2-2.5	4	11	12	4	1	1	1
3-3.5	1	4	6	4	2	1	*
4-5.5	1	1	4	2	1	1	*
6-7.5	0	*	1	1	1	*	*
8-9.5	0	*	1	0	*	*	*
≥10	0	0	0	0	0	0	0

1518

29

PERIOD (SECONDS)						
7	8- 9	10- 11	12- 13	>13	IND	
1	*	*	0	0	1	
15	3	1	*	0	1	
12	10	2	*	*	1	
2	2	4	1	1	0	
1	1	1	1	*	*	
*	*	*	*	*	0	
*	0	*	0	*	*	
0	0	0	0	0	0	

1382

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	*	*	0	0	1
1-1.5	17	12	5	2	*	*	1
2-2.5	4	10	10	5	1	1	1
3-3.5	1	3	5	4	2	1	*
4-5.5	1	1	1	1	1	1	0
6-7.5	0	*	*	*	*	*	*
8-9.5	0	0	0	0	*	*	0
≥10	0	0	0	0	0	0	0

1369

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	*	*	0	0	1
1-1.5	21	14	6	2	1	*	2
2-2.5	4	10	9	4	1	1	1
3-3.5	1	3	3	2	1	*	*
4-5.5	*	1	1	1	1	*	0
6-7.5	0	*	*	*	*	0	0
8-9.5	0	0	0	0	*	0	0
≥10	0	0	0	0	0	0	0

1715

32

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	*	*	0	0	2
1-1.5	20	16	5	2	1	*	2
2-2.5	5	12	9	4	2	*	1
3-3.5	1	2	3	2	1	*	*
4-5.5	*	*	1	*	*	*	*
6-7.5	0	*	*	*	*	*	0
8-9.5	0	0	0	*	0	0	0
≥10	0	0	0	0	0	0	0

3643

33

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	3	*	*	0	0	0	1
1-1.5	15	15	6	2	1	*	2
2-2.5	4	11	13	5	2	1	1
3-3.5	1	3	3	3	1	1	1
4-5.5	*	*	1	1	1	*	*
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1524

34

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	8	1	*	*	0	0	*
1-1.5	18	16	4	1	*	*	1
2-2.5	4	11	10	3	1	*	*
3-3.5	1	3	4	3	1	*	*
4-5.5	*	1	2	1	1	*	*
6-7.5	0	*	*	1	*	*	*
8-9.5	0	*	*	*	*	*	0
≥10	0	0	0	0	0	0	0

3382

35

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	*	*	0	0	*
1-1.5	13	9	3	1	*	*	*
2-2.5	5	11	10	5	1	*	*
3-3.5	1	5	5	5	3	1	*
4-5.5	*	2	3	3	2	1	*
6-7.5	0	*	1	1	1	*	*
8-9.5	0	*	*	*	*	*	*
≥10	0	0	0	0	0	0	0

3611

39

PERIOD (SECONDS)						
7	8- 9	10- 11	12- 13	>13	IND	
1	0	0	0	0	1	
18	6	*	1	0	2	
20	8	3	*	0	0	
1	2	1	*	1	0	
*	1	*	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	
0	0	0	0	0	0	

216

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	5	1	*	*	0	0	2
1-1.5	23	14	5	2	2	*	1
2-2.5	7	9	11	2	1	1	1
3-3.5	1	2	4	3	1	0	*
4-5.5	*	0	1	2	1	1	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

532

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	4	1	0	0	0	0	1
1-1.5	18	14	5	3	0	0	2
2-2.5	6	15	9	4	1	0	0
3-3.5	2	7	3	2	3	1	1
4-5.5	0	1	1	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

197

42

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	6	1	*	0	0	0	1
1-1.5	21	17	6	1	1	*	3
2-2.5	4	15	8	3	1	*	1
3-3.5	2	2	2	*	1	*	1
4-5.5	0	*	*	*	*	*	0
6-7.5	0	*	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

740

43

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	17	3	1	*	0	0	4
1-1.5	27	17	7	3	3	*	2
2-2.5	3	4	3	2	*	1	1
3-3.5	0	*	*	*	*	0	0
4-5.5	0	0	0	0	0	*	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

784

44

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	25	2	1	*	0	0	7
1-1.5	22	16	7	1	*	*	2
2-2.5	2	5	3	1	*	0	*
3-3.5	1	1	1	*	*	*	*
4-5.5	*	*	1	*	0	*	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1470

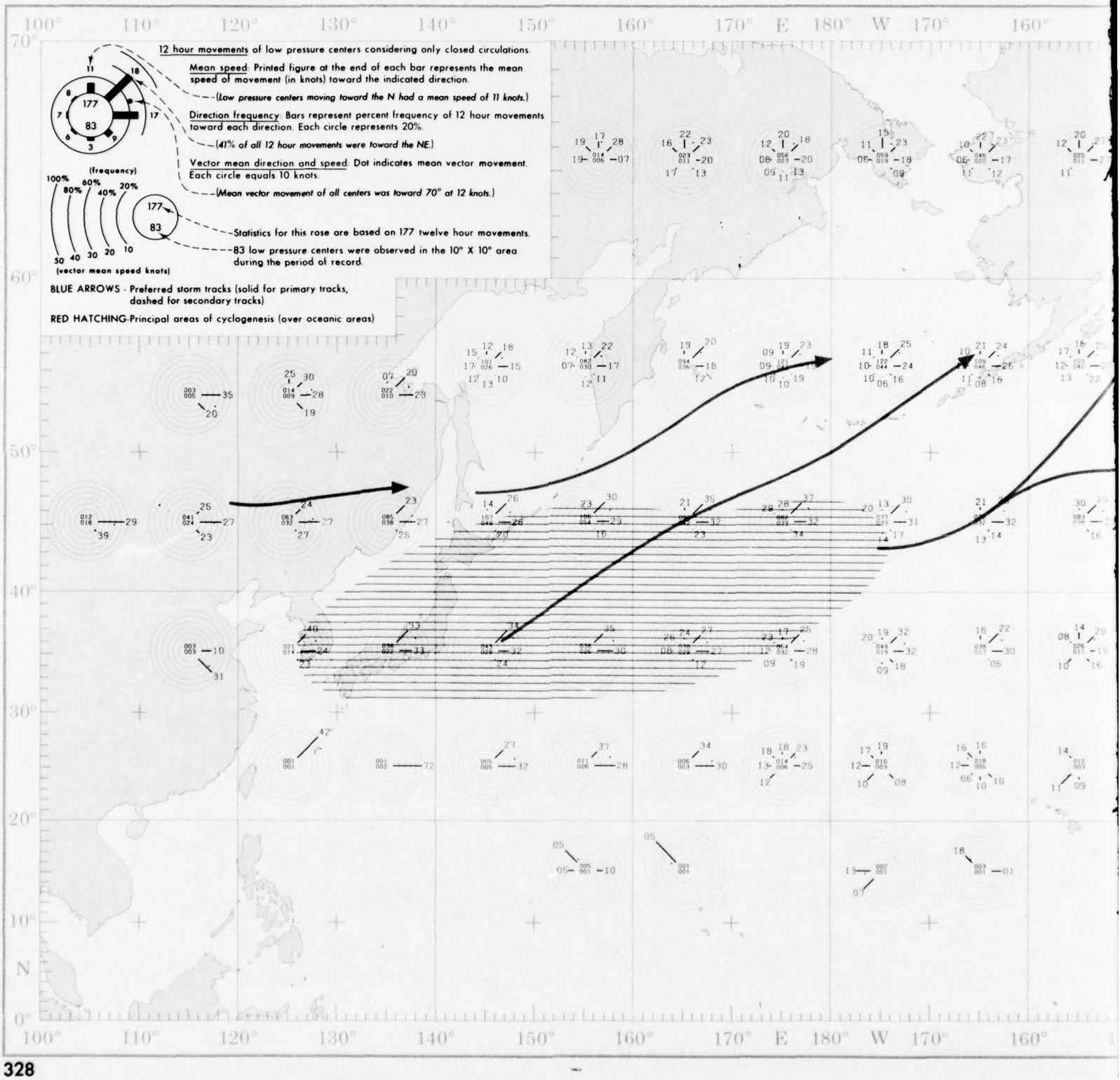
45

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6- 7	8- 9	10- 11	12- 13	>13	IND
0-.5	36	4	8	0	0	0	15
1-1.5	15	15	4	0	0	0	0
2-2.5	0	4	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

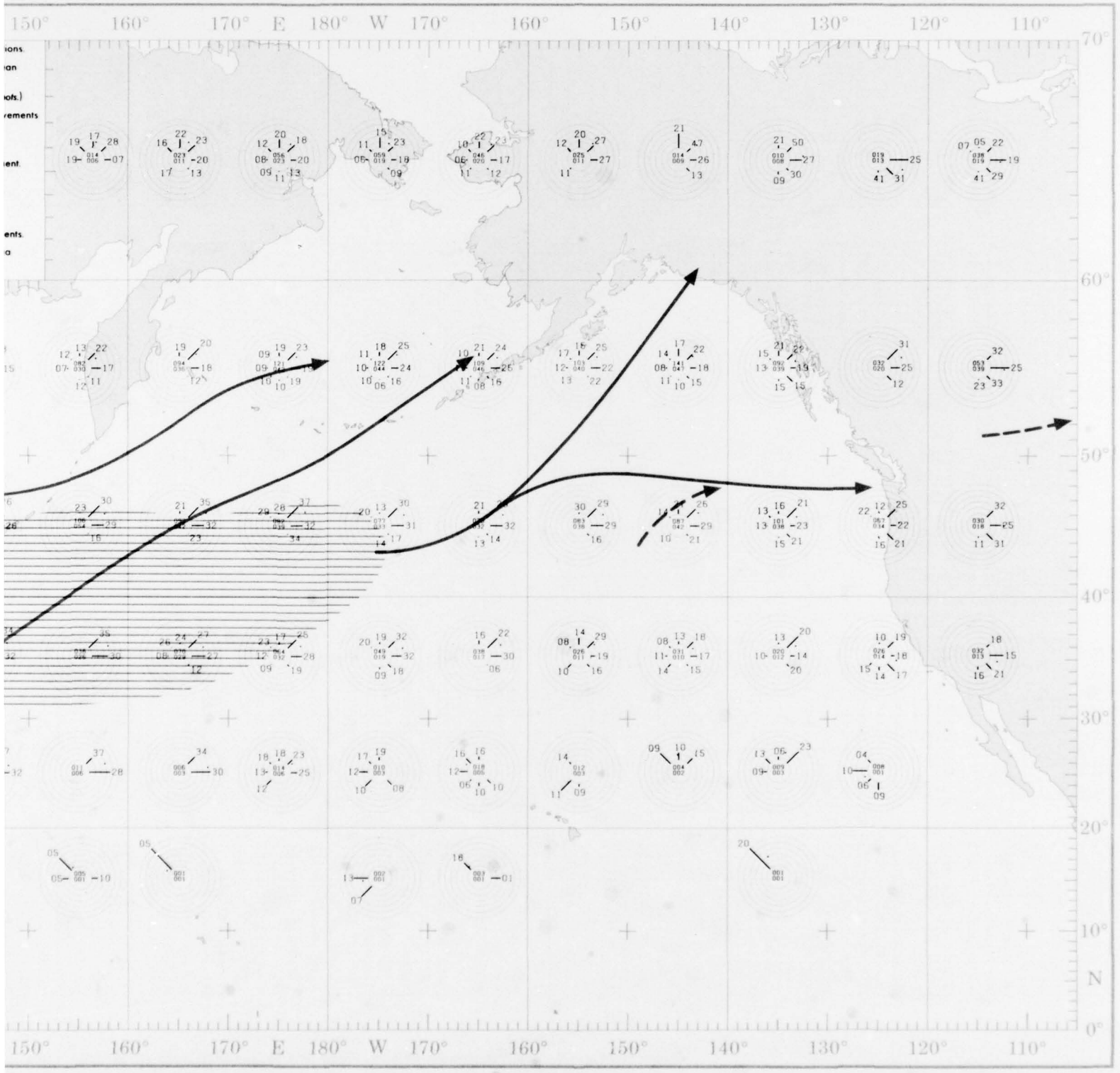
53

t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

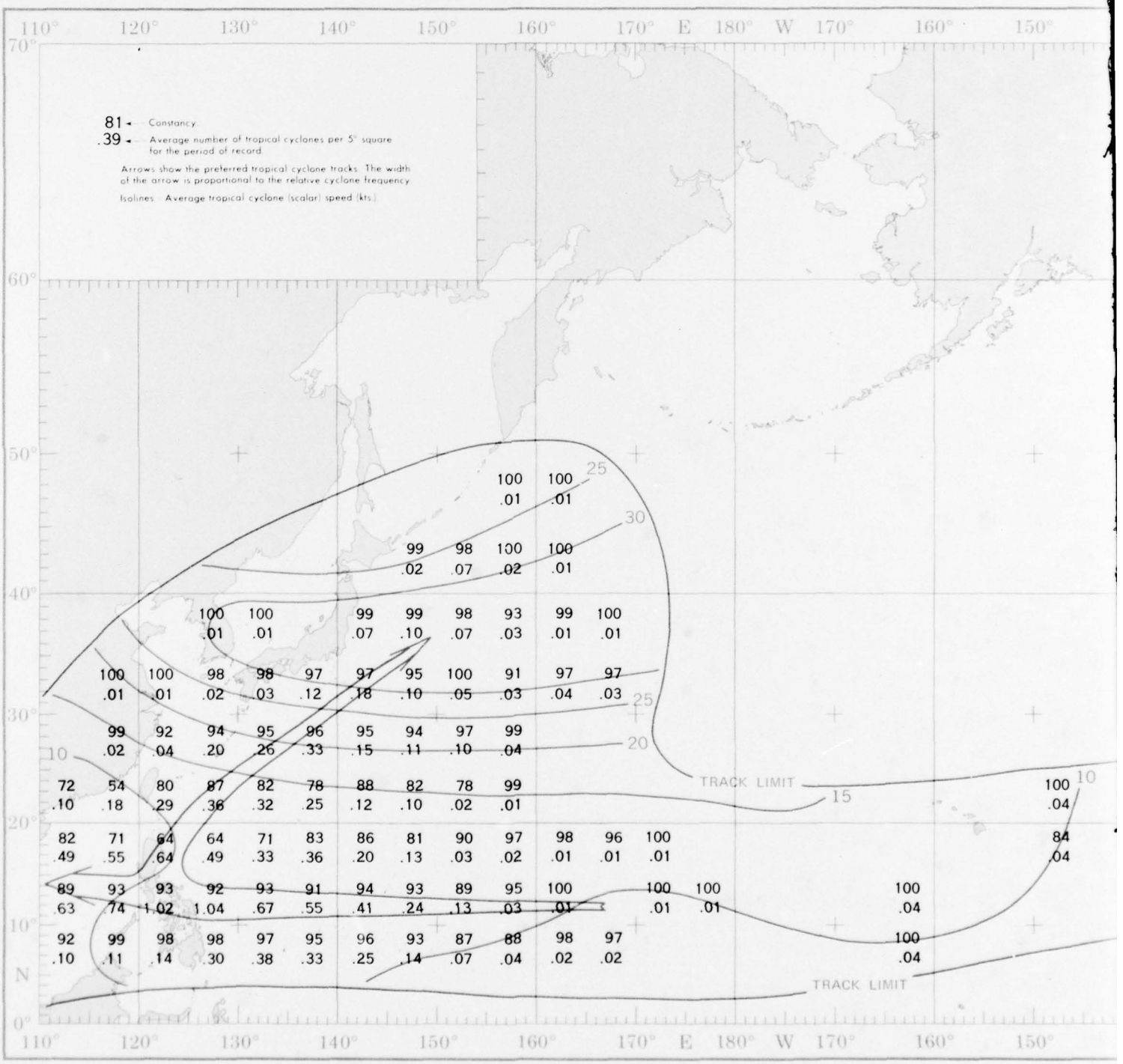
NOVEMBER

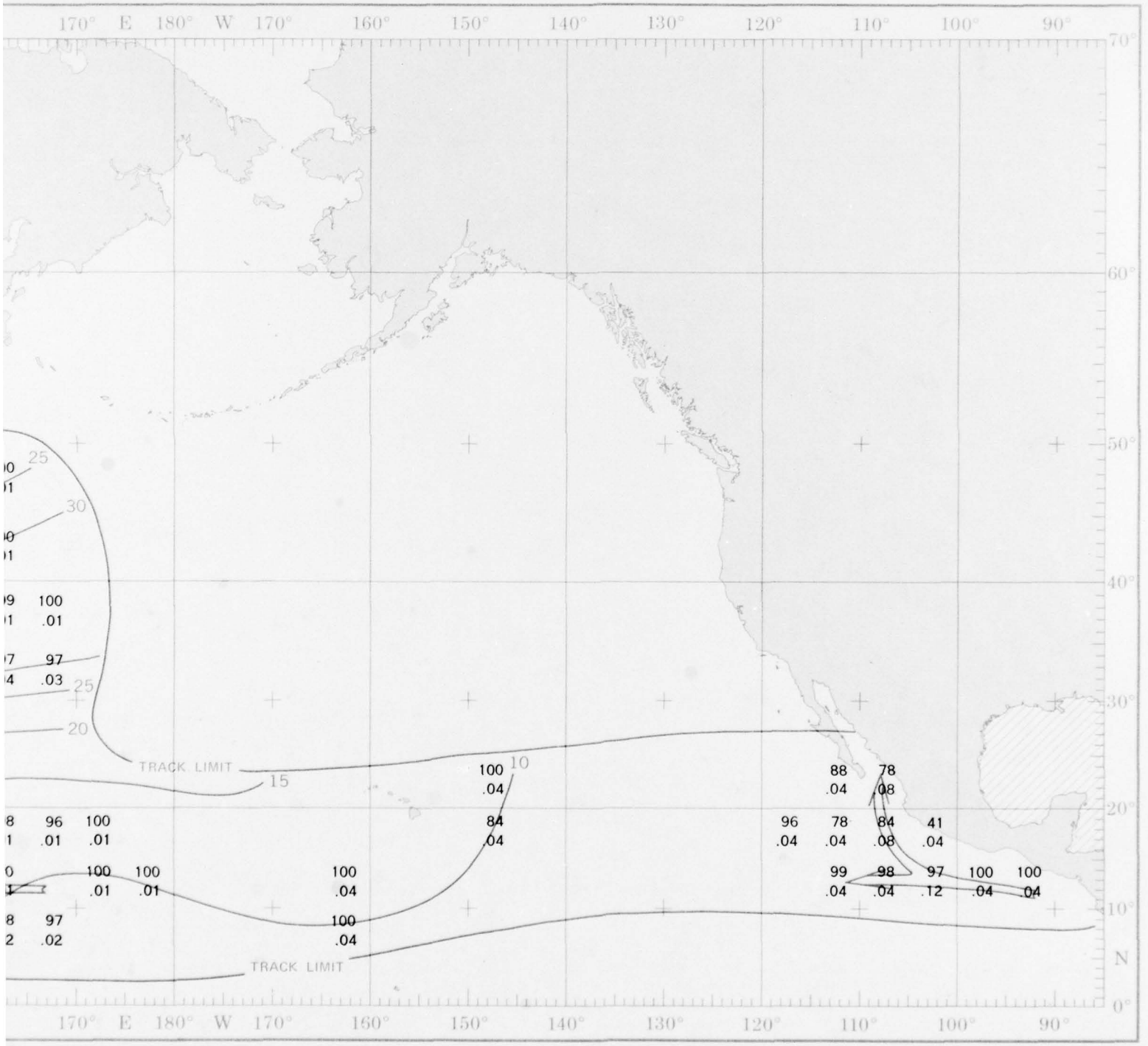

12 hour movements of low pressure centers considering only closed circulations.
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Low pressure centers moving toward the N had a mean speed of 11 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(41% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 70° at 12 knots.)
Statistics for this rose are based on 177 twelve hour movements.
83 low pressure centers were observed in the 10° X 10° area during the period of record.
(frequency)
100% 80% 60% 40% 20%
50 40 30 20 10
(vector mean speed knots)
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

LOW PRESSURE CENTERS

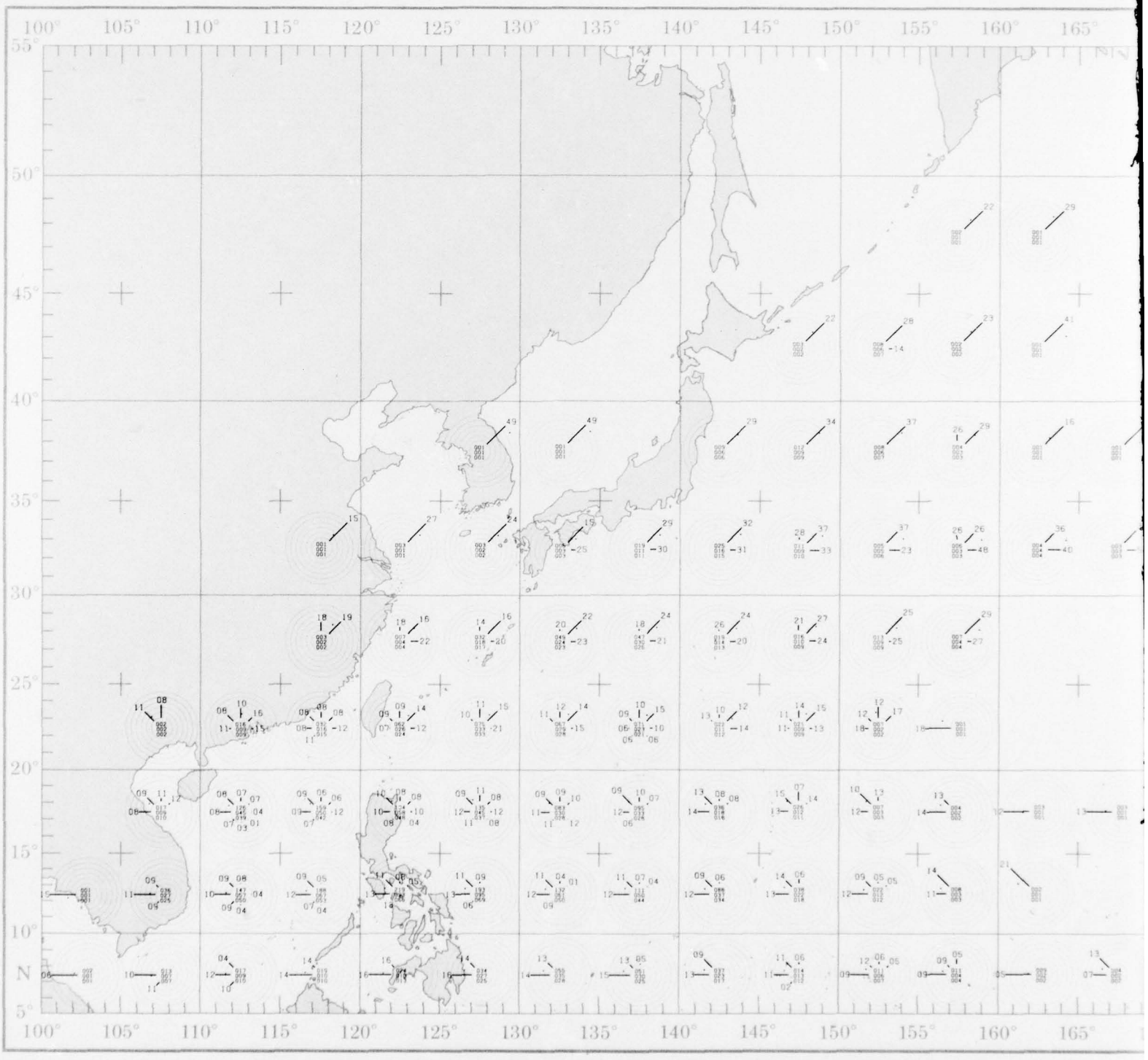


TROPICAL CYCLONE CHARACTERISTICS

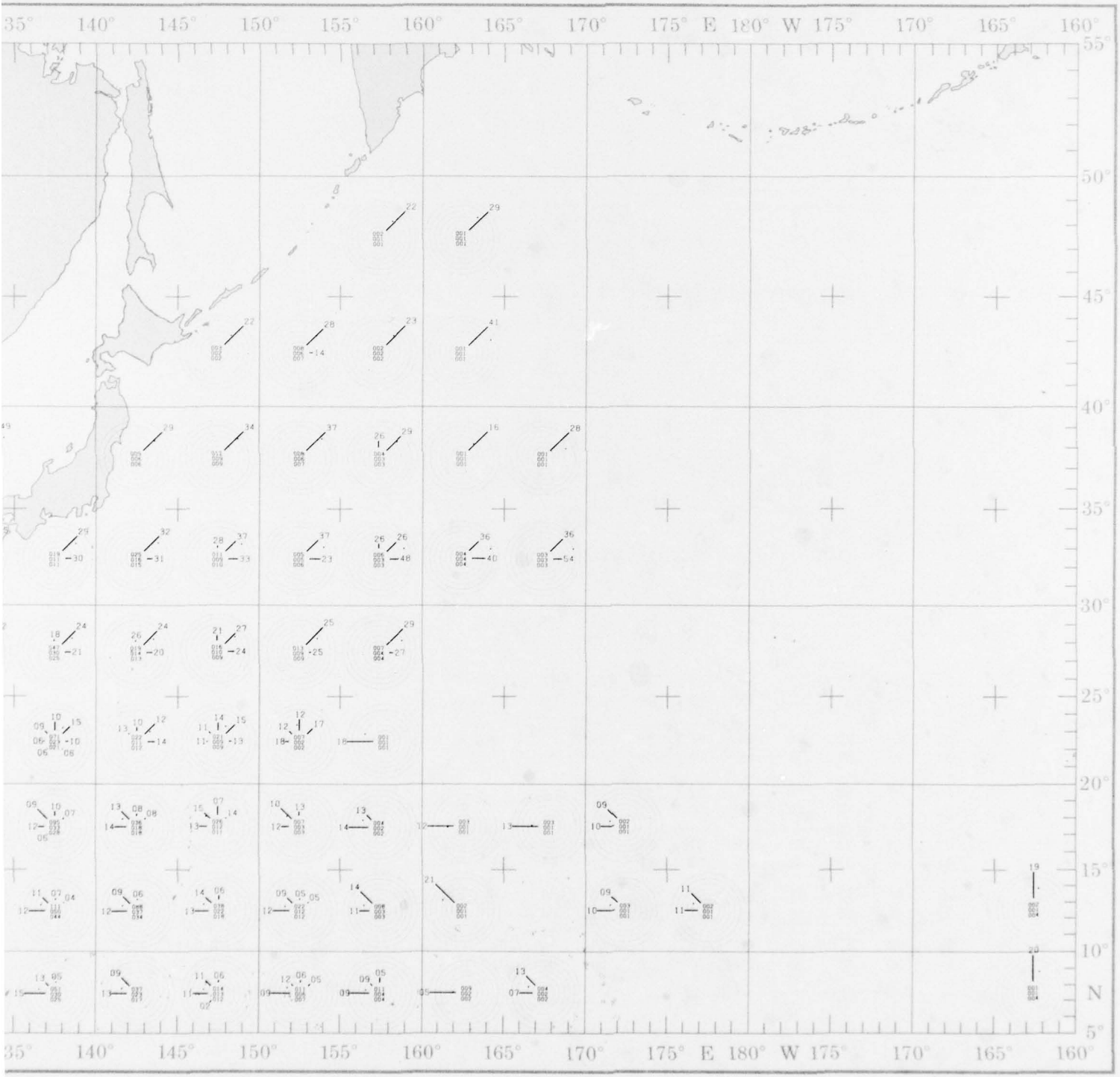



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
0°
N
25
30
25
20
15
10
TRACK LIMIT
TRACK LIMIT
100 .01
97 .03
100 .04
88 .04
78 .08
96 .01
100 .01
84 .04
96 .04
78 .04
84 .08
41 .04
100 .01
100 .01
100 .04
99 .04
98 .04
97 .12
100 .04
100 .04
97 .02
100 .04

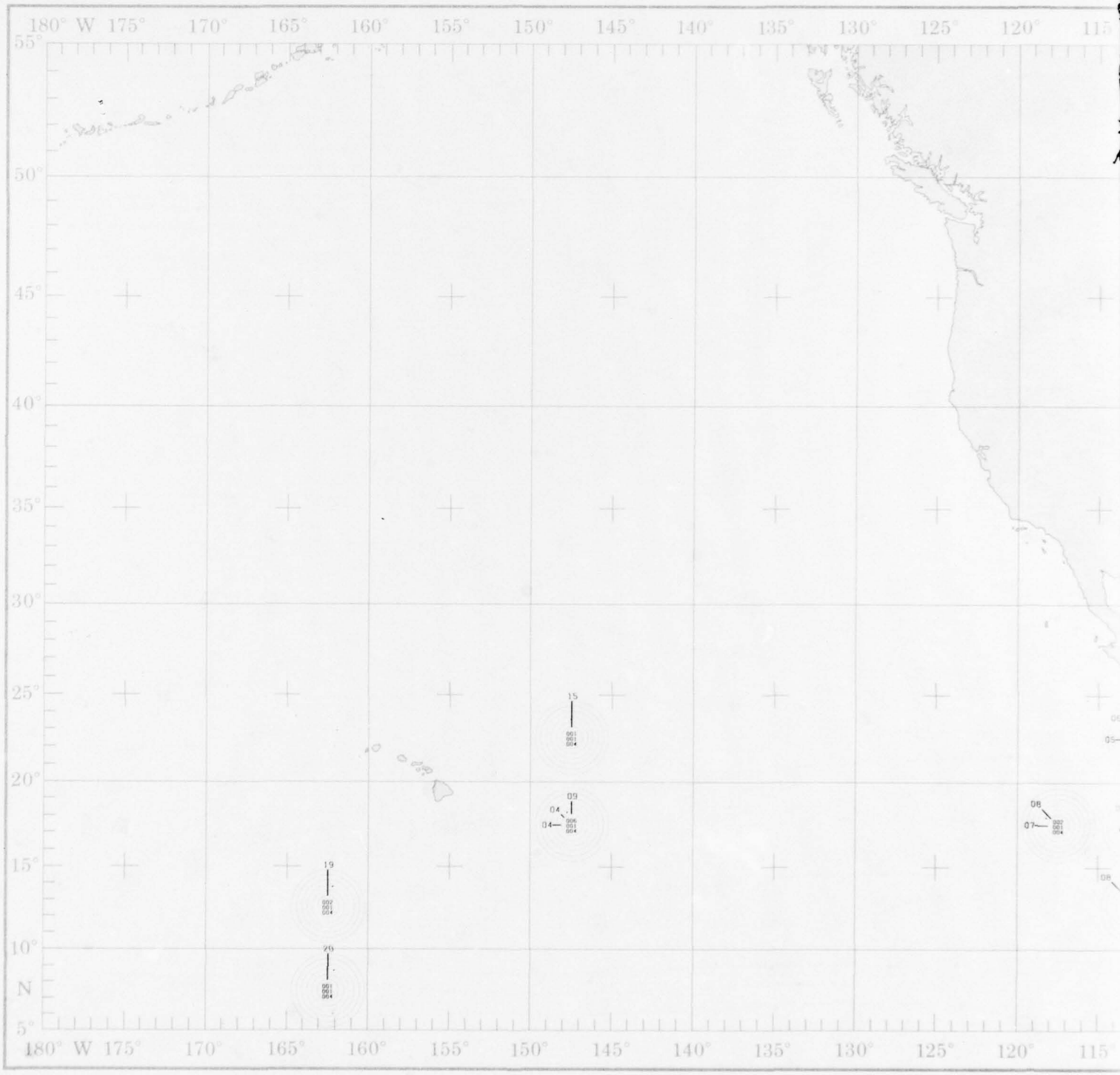
NOVEMBER


100° 105° 110° 115° 120° 125° 130° 135° 140° 145° 150° 155° 160° 165°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°

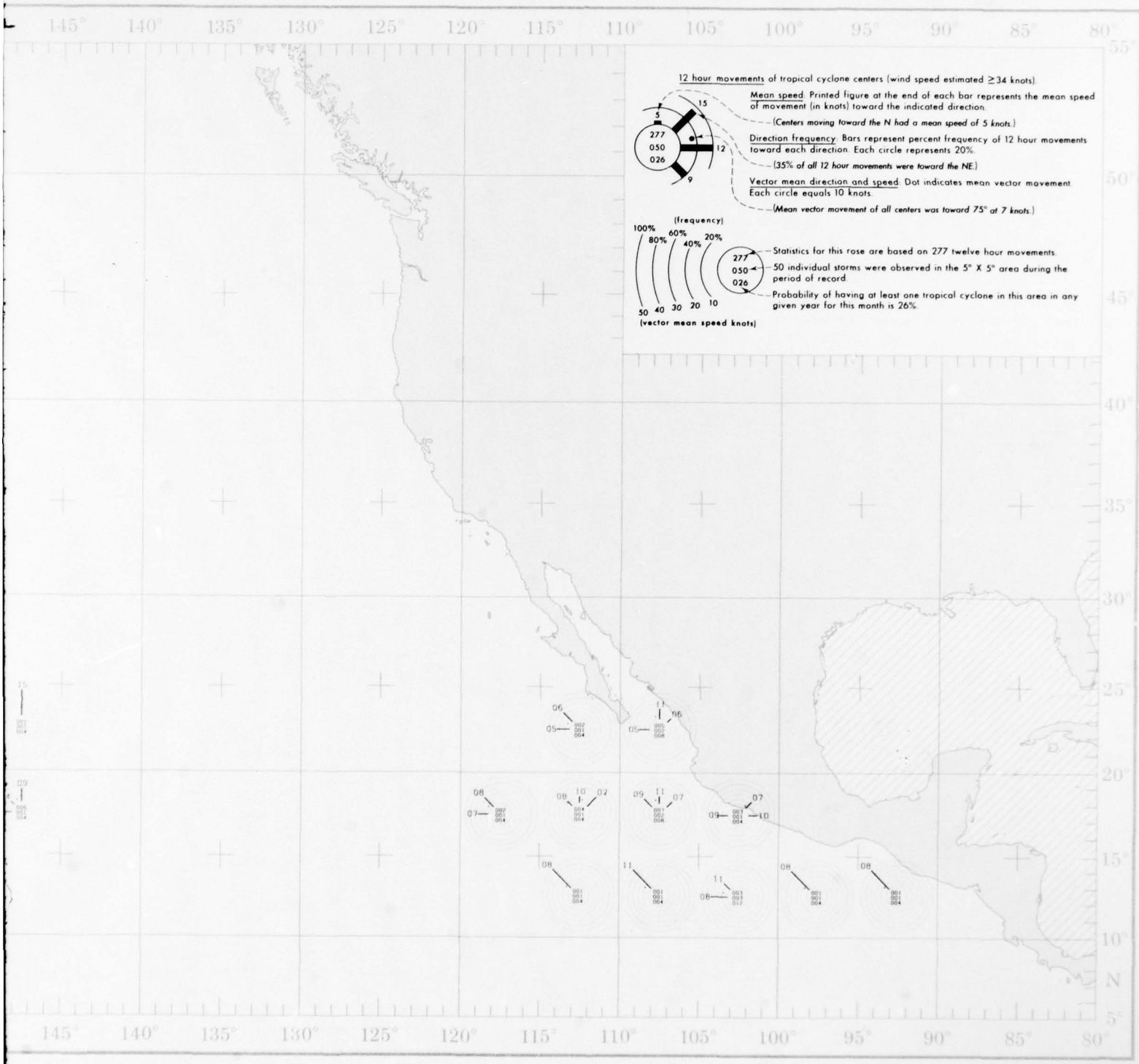
TROPICAL CYCLONE



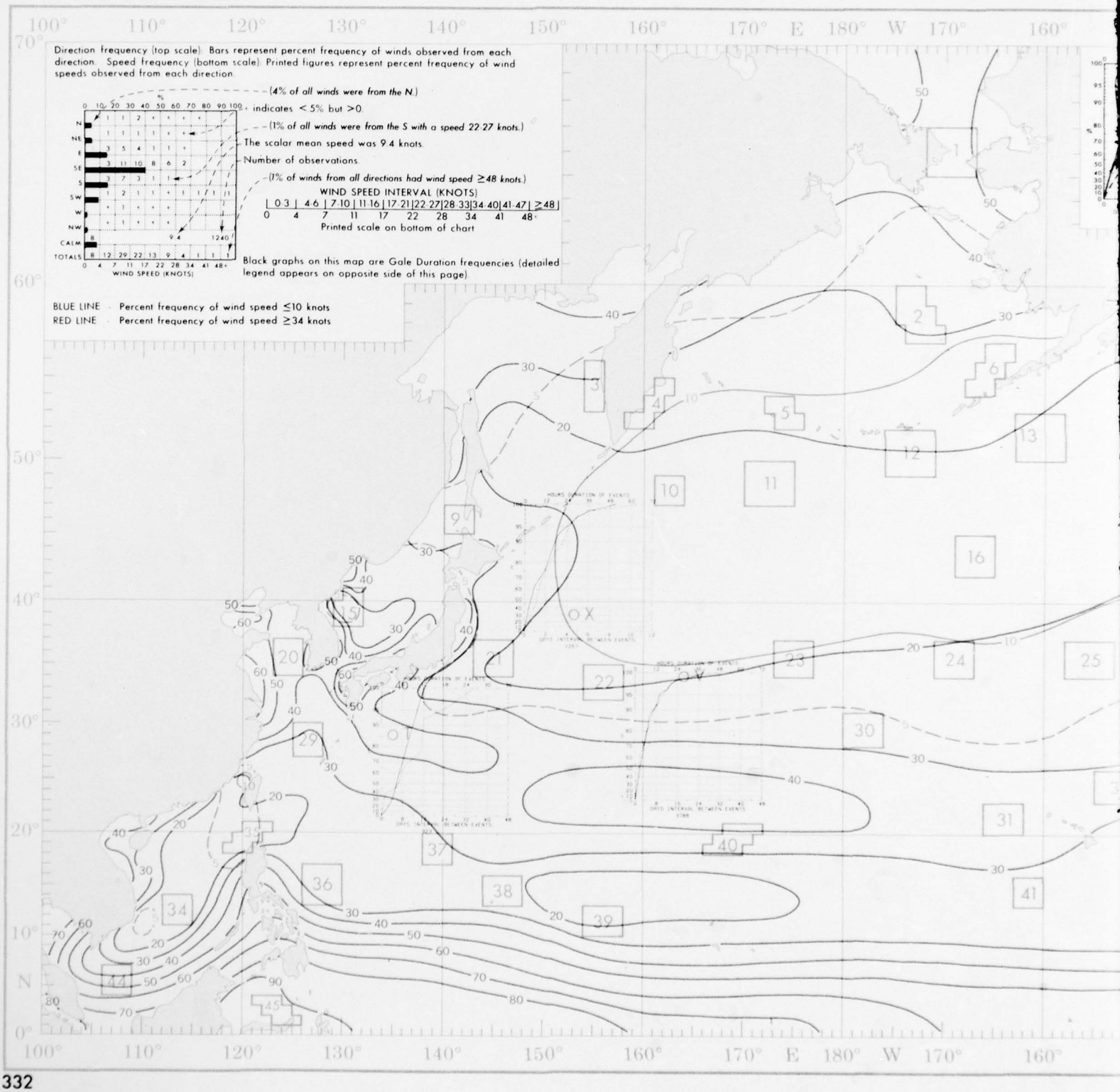
TROPICAL CYCLONE



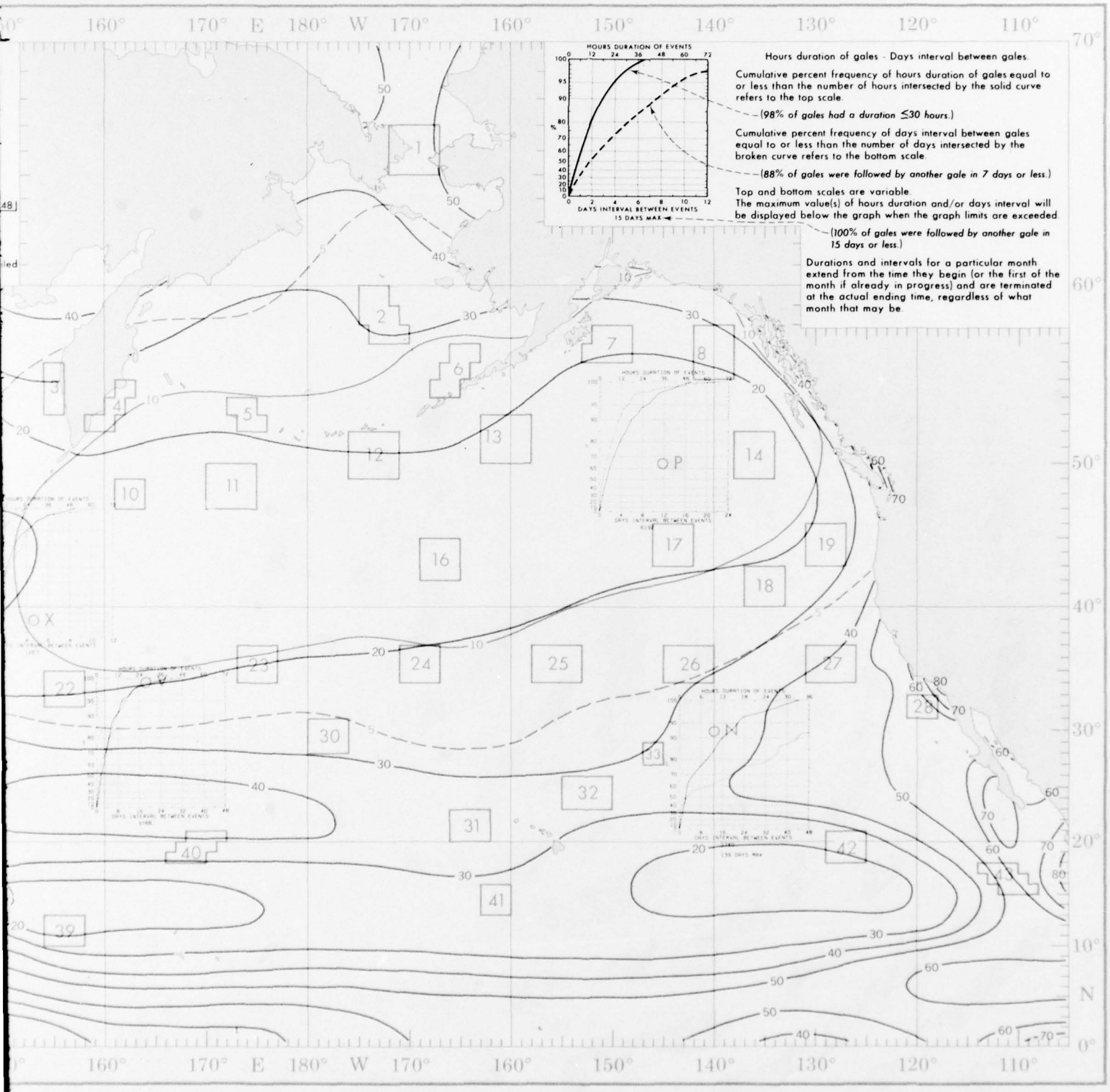
NOVEMBER


12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
12
9
277
050
026
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.
145° 140° 135° 130° 125° 120° 115° 110° 105° 100° 95° 90° 85° 80°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° 5° N

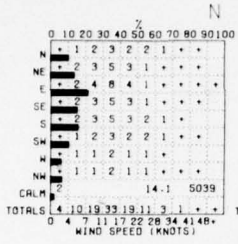
DECEMBER

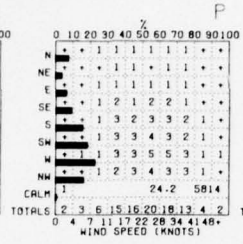

Direction frequency (top scale): Bars represent percent frequency of winds observed from each direction. Speed frequency (bottom scale): Printed figures represent percent frequency of wind speeds observed from each direction.
(4% of all winds were from the N.)
indicates < 5% but >0.
(1% of all winds were from the S with a speed 22-27 knots.)
The scalar mean speed was 9.4 knots.
Number of observations.
(1% of winds from all directions had wind speed ≥48 knots.)
WIND SPEED INTERVAL (KNOTS)
| 0-3 | 4-6 | 7-10 | 11-16 | 17-21 | 22-27 | 28-33 | 34-40 | 41-47 | ≥48 |
0 4 7 11 17 22 28 34 41 48+
Printed scale on bottom of chart
Black graphs on this map are Gale Duration frequencies (detailed legend appears on opposite side of this page).
BLUE LINE - Percent frequency of wind speed ≤10 knots
RED LINE - Percent frequency of wind speed ≥34 knots
N NE E SE S SW W NW CALM TOTALS
WIND SPEED (KNOTS)

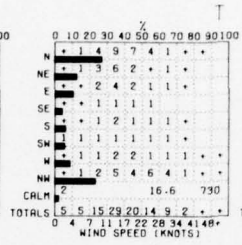
SURFACE WINDS

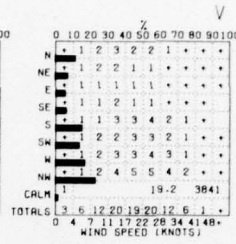


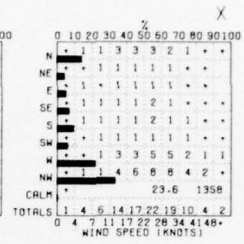
WIND DIRECTION AND SPEED



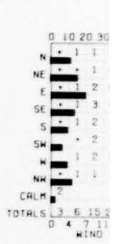


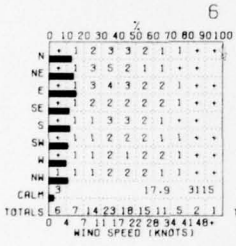


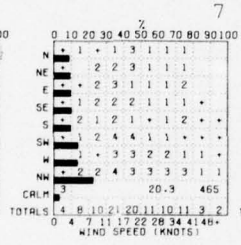


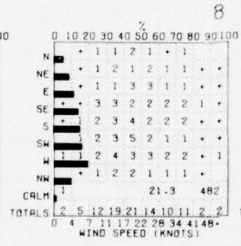


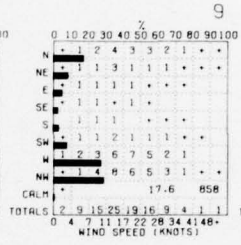
INSUFFICIENT DATA

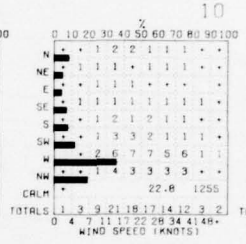


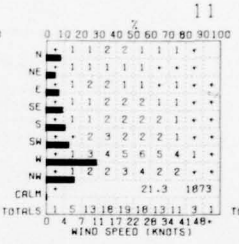


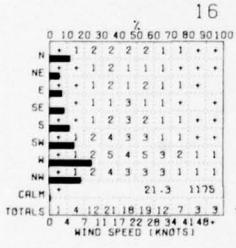


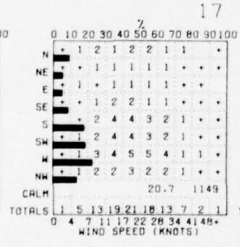


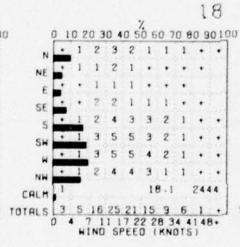


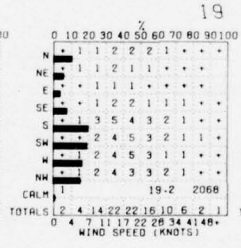


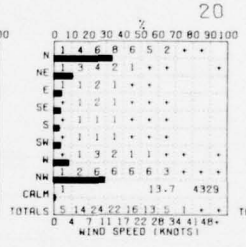


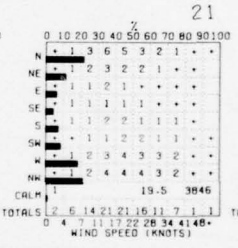


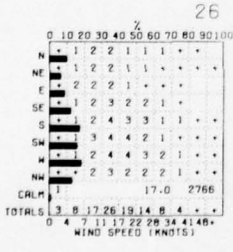




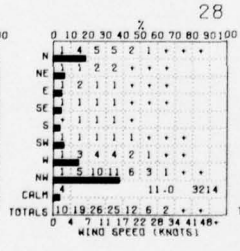


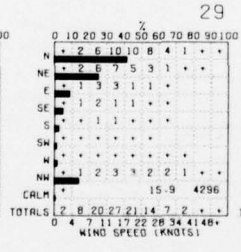


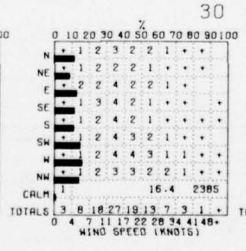


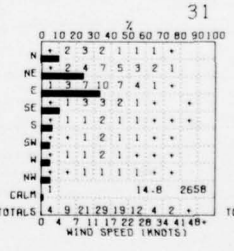


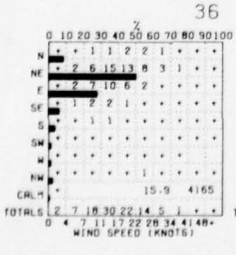


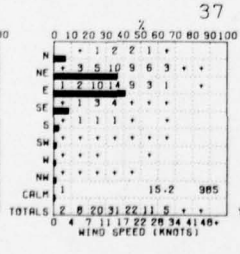


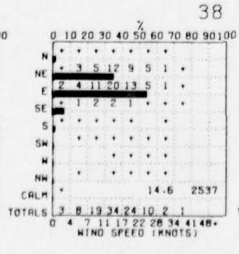


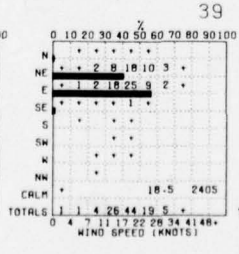


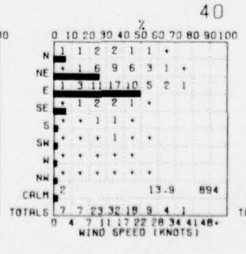


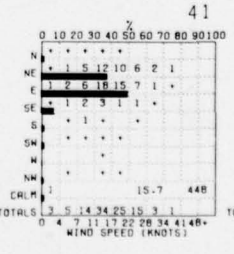




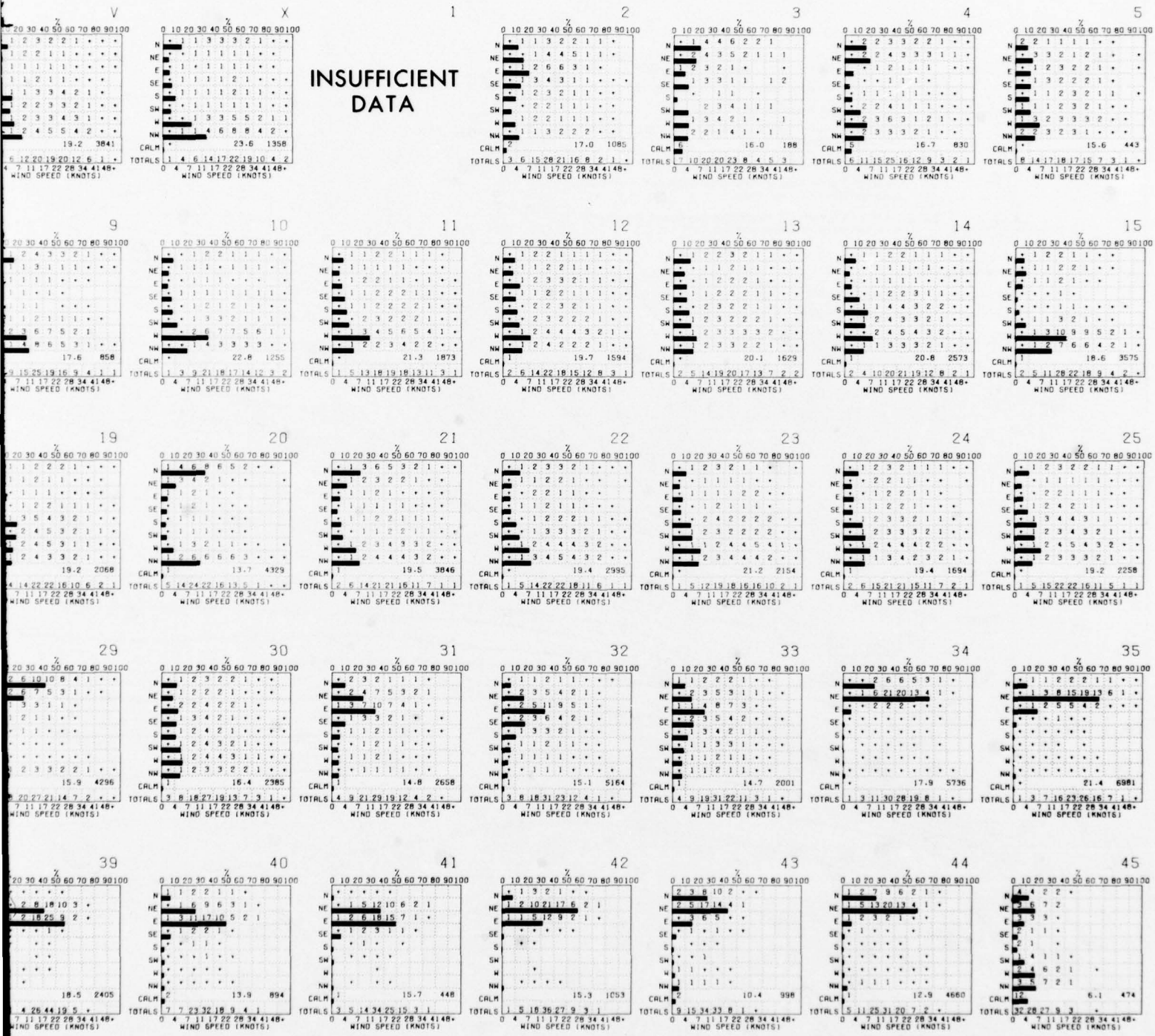






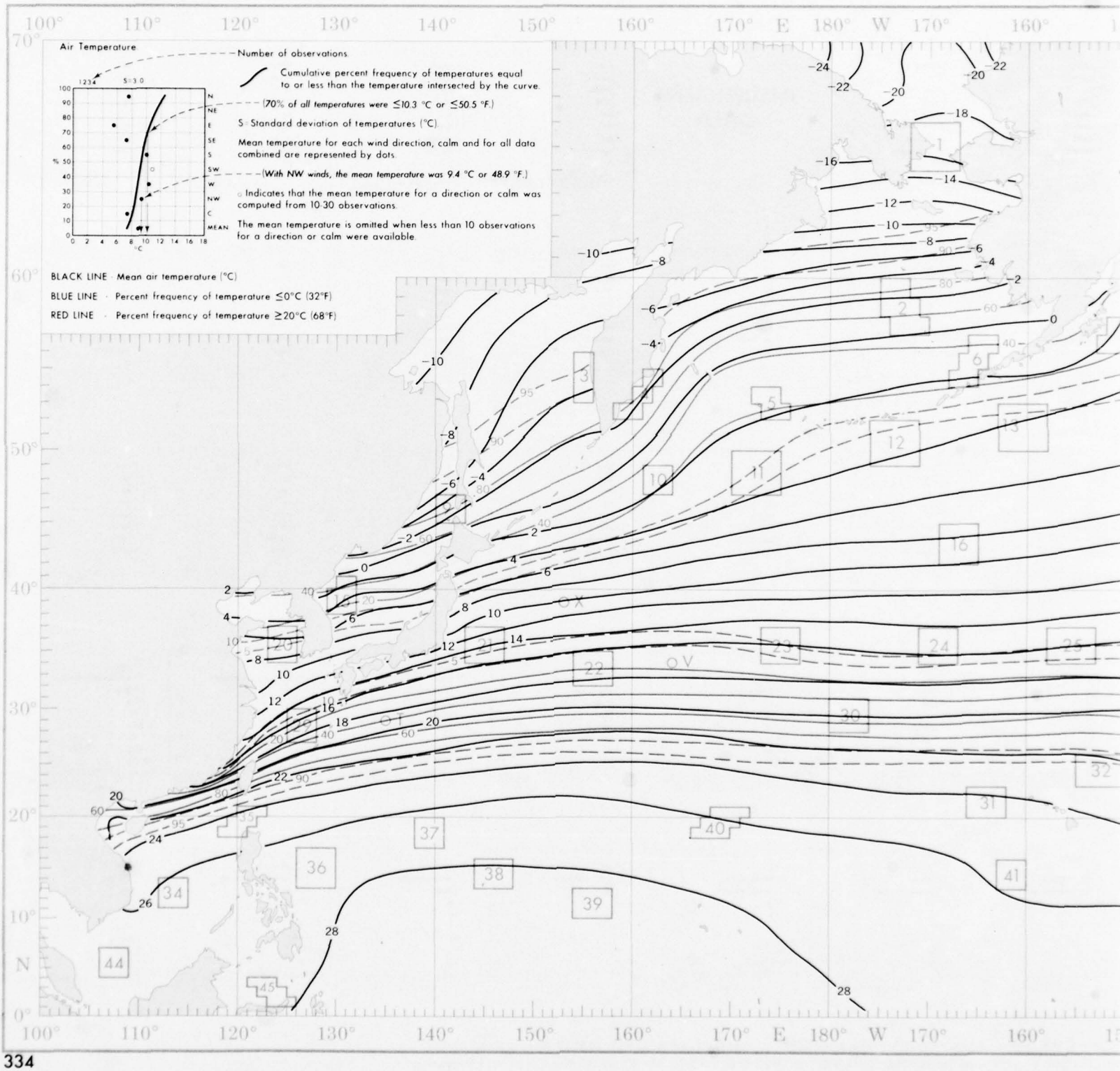


Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted w

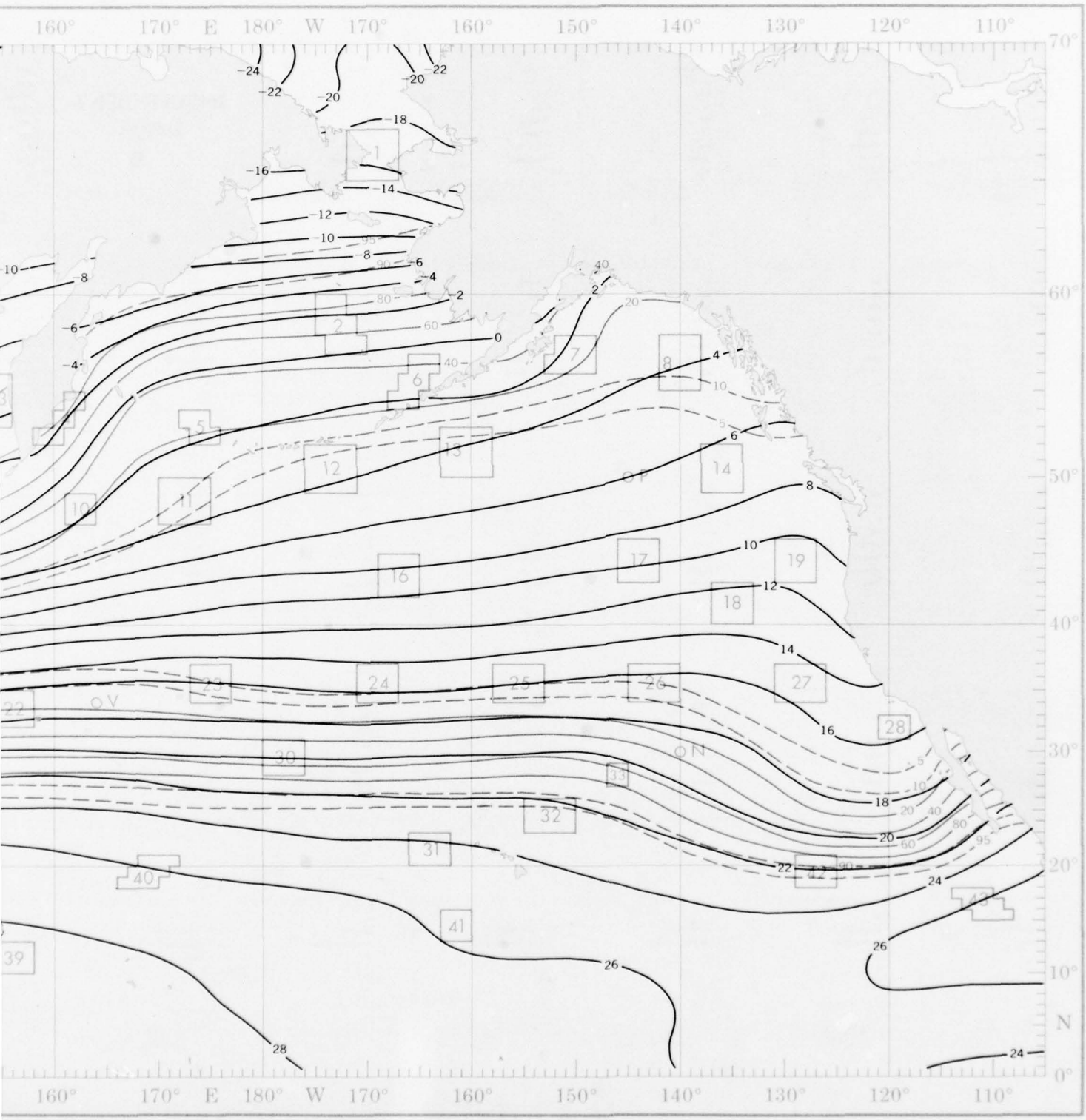


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lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

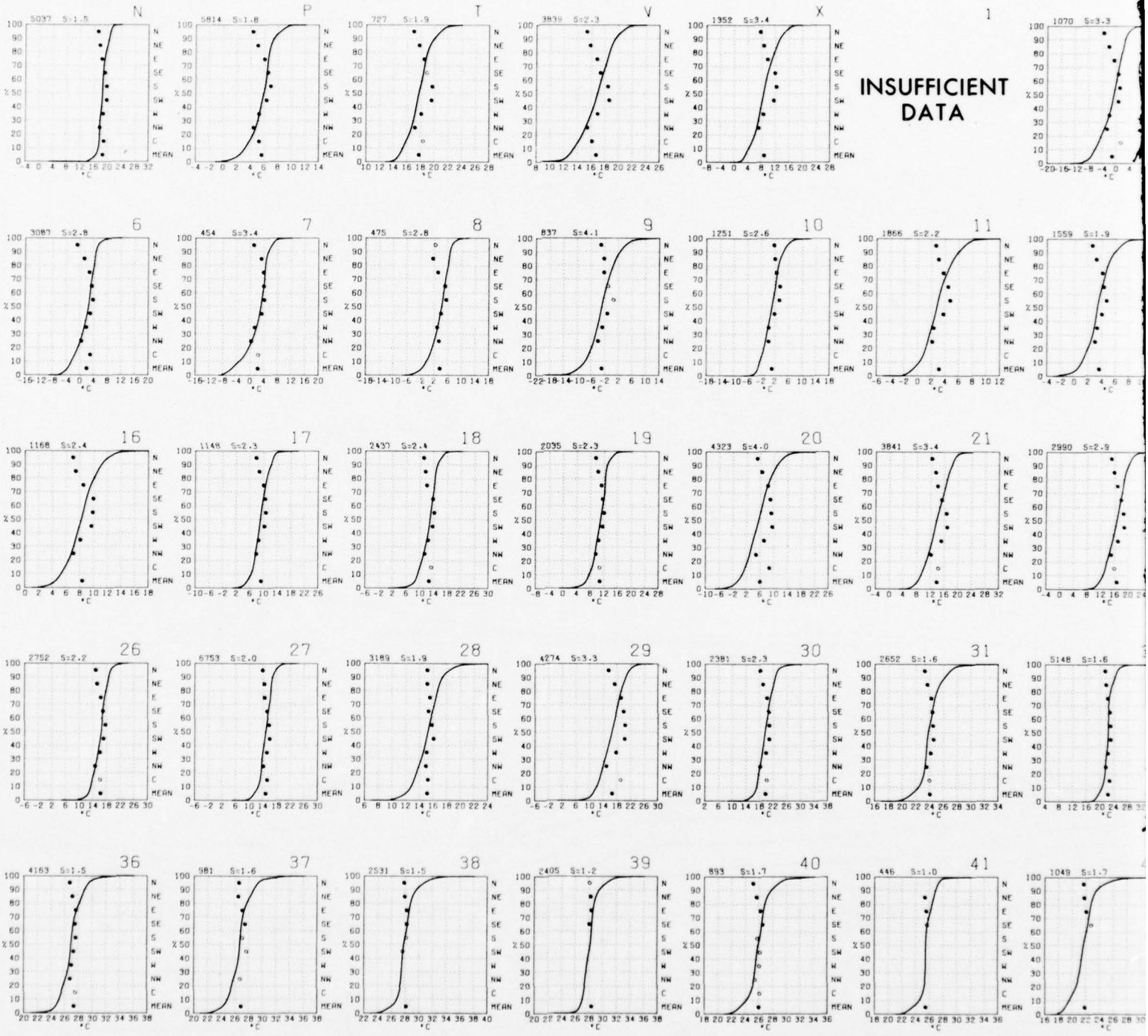
DECEMBER


Air Temperature
Number of observations.
Cumulative percent frequency of temperatures equal to or less than the temperature intersected by the curve.
(70% of all temperatures were ≤10.3 °C or ≤50.5 °F.)
S - Standard deviation of temperatures (°C).
Mean temperature for each wind direction, calm and for all data combined are represented by dots.
(With NW winds, the mean temperature was 9.4 °C or 48.9 °F.)
○ Indicates that the mean temperature for a direction or calm was computed from 10-30 observations.
The mean temperature is omitted when less than 10 observations for a direction or calm were available.
1234
S=3.0
N
NE
E
SE
S
SW
W
NW
C
MEAN
°C
BLACK LINE - Mean air temperature (°C)
BLUE LINE - Percent frequency of temperature ≤0°C (32°F)
RED LINE - Percent frequency of temperature ≥20°C (68°F)

SURFACE AIR TEMPERATURE



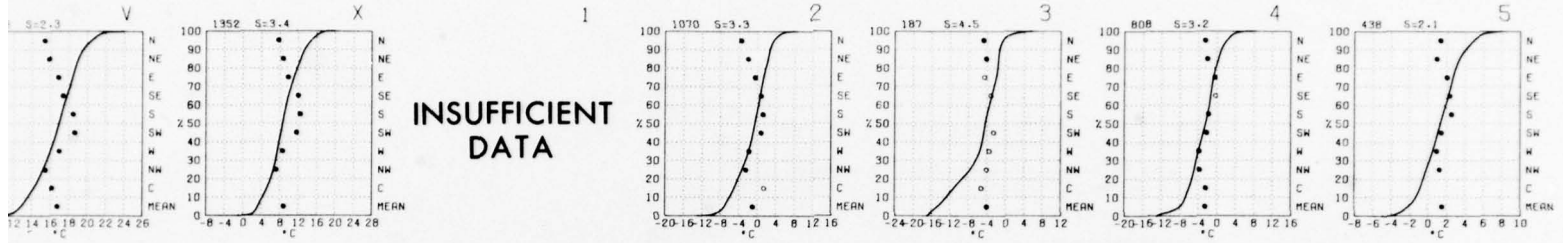
SURFACE AIR TEMPERATURE

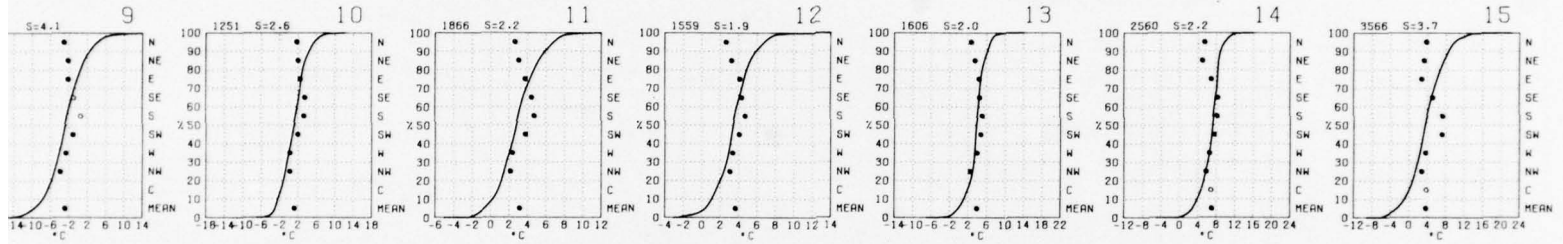


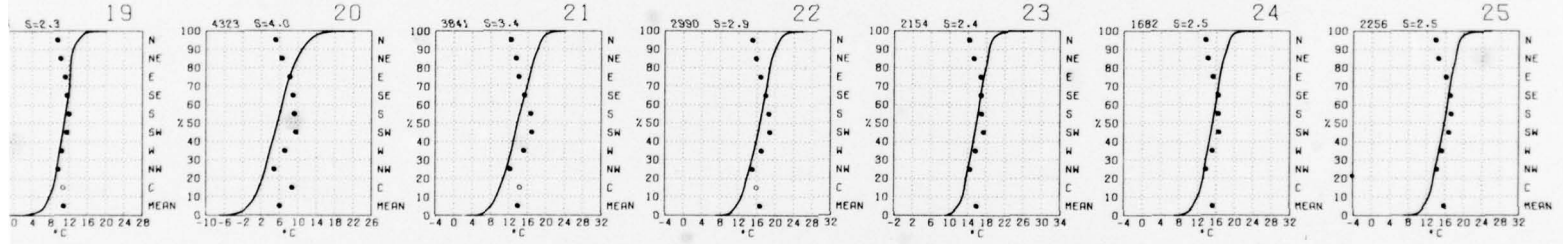
Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

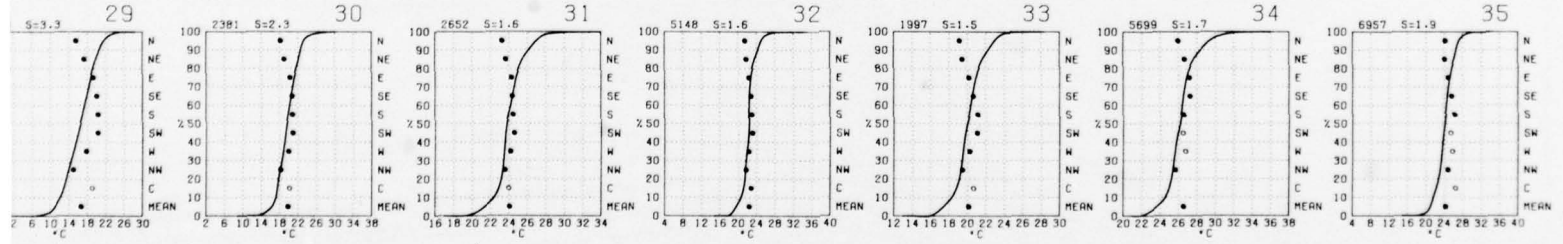
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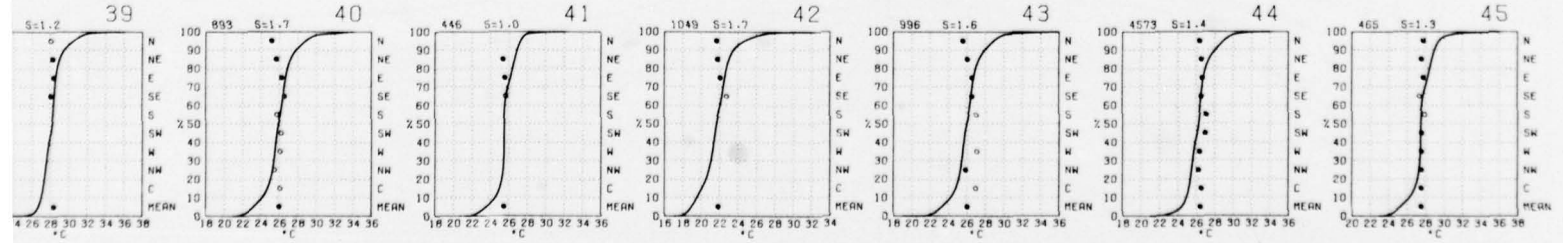
DECEMBER







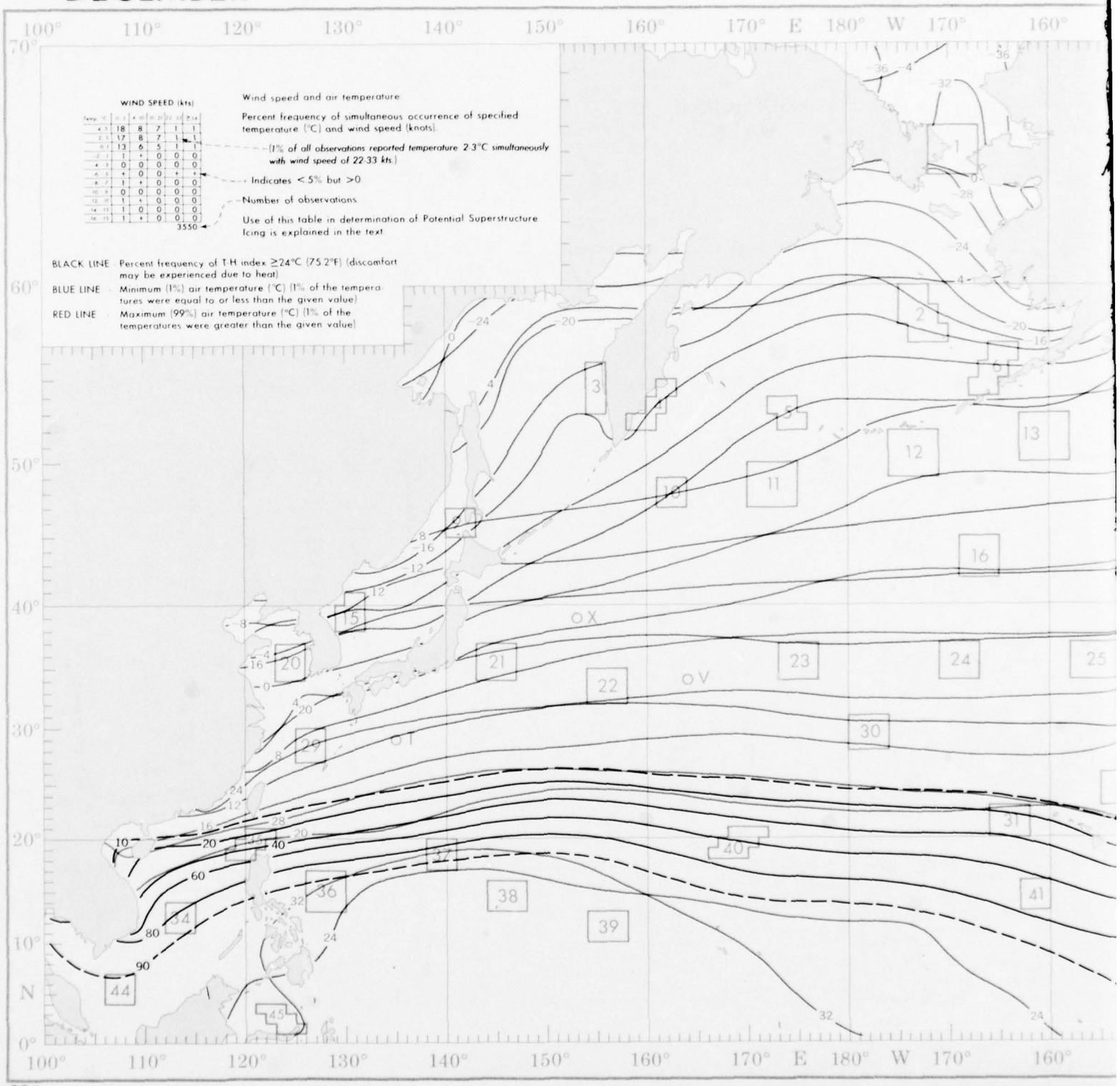




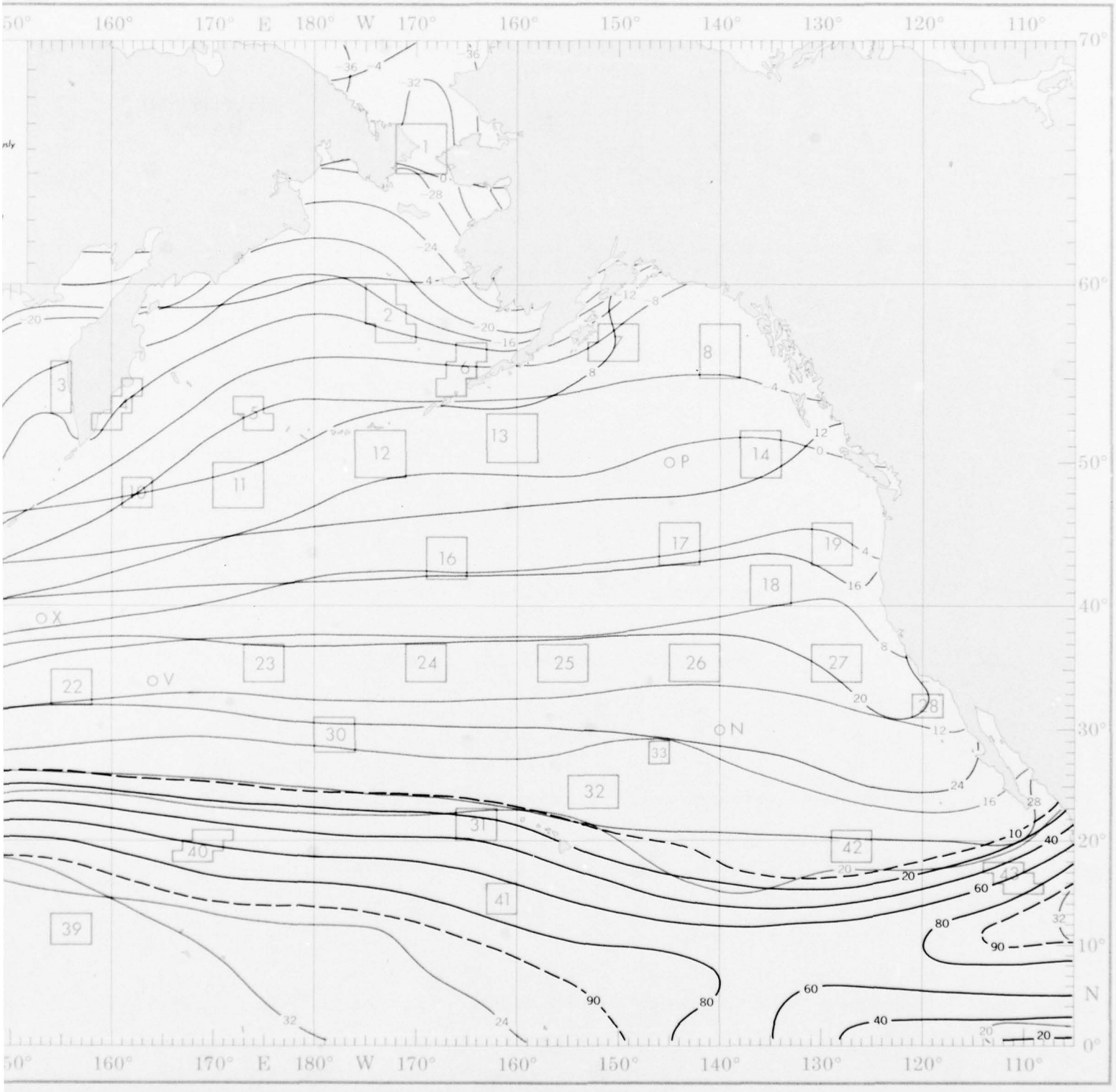
nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

TEMPERATURE



TEMPERATURE EXTREMES AND T-H INDEX



WIND SPEED AND AIR TEMPERATURE

N

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	+	1	1	1	+
20.21	1	7	13	5	+
18.19	3	17	27	4	1
16.17	1	5	10	3	+
14.15	0	+	1	+	0
12.13	0	+	+	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
≤5	0	0	+	0	0

5037

P

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	+	+
8.9	+	1	3	6	4
6.7	1	5	17	19	8
4.5	1	3	8	9	5
2.3	+	1	3	3	2
0.1	0	+	+	1	1
-2.-1	0	0	+	+	+
-4.-3	0	0	0	0	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0

5814

T

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	+	1	1	1	0
20.21	1	2	7	3	+
18.19	3	9	18	8	1
16.17	1	6	19	8	1
14.15	0	1	4	3	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

727

V

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	+	1	+
20.21	+	1	4	5	1
18.19	1	5	12	9	2
16.17	2	7	12	8	1
14.15	+	4	7	6	1
12.13	+	1	2	3	1
10.11	0	+	+	+	+
8.9	0	0	+	0	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0
2.3	0	0	0	0	0

3839

X

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	0	+	0
16.17	0	+	1	2	1
14.15	+	+	2	3	2
12.13	+	1	5	6	2
10.11	+	2	6	5	2
8.9	1	3	10	9	4
6.7	+	2	5	9	2
4.5	0	1	3	3	2
2.3	0	+	1	4	2
0.1	0	+	0	+	+
-2.-1	0	0	0	0	0

1352

INSUFFICIENT DATA

1

TEMP (°C)	0-3	4-10	11-21	22-33
6.7	0	0	+	1
4.5	1	1	1	1
2.3	1	7	11	3
0.1	1	5	15	6
-2.-1	+	2	8	4
-4.-3	+	2	6	3
-6.-5	+	2	5	3
-8.-7	0	1	2	2
-10.-9	0	+	+	1
-12.-11	0	0	+	+
-14.-13	0	0	0	+

1

6

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	+	0
8.9	+	+	+	+	+
6.7	+	1	2	2	1
4.5	1	6	14	8	2
2.3	2	6	12	6	2
0.1	1	3	6	4	1
-2.-1	+	2	4	3	1
-4.-3	+	1	2	3	1
-6.-5	0	+	1	1	+
-8.-7	0	+	0	+	+
-10.-9	0	0	0	+	+

3088

7

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	+	0
10.11	0	0	+	0	+
8.9	+	+	0	0	0
6.7	0	3	4	3	2
4.5	2	6	19	6	5
2.3	1	4	5	5	4
0.1	+	3	6	3	1
-2.-1	0	2	3	2	+
-4.-3	0	+	1	1	1
-6.-5	+	0	2	1	2
≤-7	0	0	+	0	1

455

8

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	0	+	0	+
8.9	0	1	1	1	1
6.7	1	5	11	7	5
4.5	1	5	12	6	3
2.3	0	3	9	5	2
0.1	+	3	4	3	1
-2.-1	0	+	2	1	1
-4.-3	0	+	1	1	1
-6.-5	0	0	+	+	0
-8.-7	0	0	+	0	0
-10.-9	0	0	0	0	0

475

9

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	+	+	0
8.9	0	0	+	+	0
6.7	+	+	2	+	+
4.5	0	1	2	1	0
2.3	+	3	2	1	+
0.1	+	5	6	2	1
-2.-1	1	5	9	5	1
-4.-3	+	3	9	7	1
-6.-5	+	3	8	5	1
-8.-7	+	2	4	2	+
≤-9	+	1	3	2	+

837

10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	+
8.9	0	0	+	0	+
6.7	0	1	2	2	1
4.5	+	2	5	4	2
2.3	+	4	12	10	4
0.1	+	2	9	8	5
-2.-1	0	2	7	5	5
-4.-3	+	1	3	2	1
-6.-5	0	0	+	+	+
-8.-7	0	0	+	0	0
-10.-9	0	0	0	0	0

1251

11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	+	0
10.11	0	+	+	+	+
8.9	0	+	1	1	+
6.7	+	2	6	3	1
4.5	+	5	10	7	4
2.3	+	7	13	11	5
0.1	+	3	5	6	3
-2.-1	+	1	1	1	+
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1866

1

TEMP (°C)	0-3	4-10	11-21	22-33	≥
12.13	0	0	0	+	0
10.11	0	0	+	0	
8.9	+	1	1	1	
6.7	+	3	6	4	
4.5	1	7	15	9	
2.3	1	8	13	11	
0.1	+	2	4	2	
-2.-1	+	1	1	+	
-4.-3	0	0	+	+	
-6.-5	0	0	0	0	
-8.-7	0	0	0	0	

19

16

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
16.17	0	0	+	+	0
14.15	0	+	+	1	0
12.13	+	2	3	3	1
10.11	1	3	11	6	2
8.9	+	6	12	11	4
6.7	+	4	10	8	4
4.5	+	1	2	2	2
2.3	0	+	+	1	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0
-4.-3	0	0	0	0	0

1168

17

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	0	0
16.17	0	+	0	+	0
14.15	0	+	1	1	+
12.13	0	3	8	4	2
10.11	+	6	12	9	2
8.9	+	5	13	11	3
6.7	+	3	5	4	2
4.5	0	+	1	2	1
2.3	0	0	+	0	+
0.1	0	0	0	0	0
-2.-1	0	0	0	0	0

1148

18

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	+	+	0	0	+
18.19	+	+	+	+	+
16.17	+	2	6	3	1
14.15	1	6	14	7	2
12.13	1	8	15	6	1
10.11	+	4	7	5	1
8.9	+	1	2	2	1
6.7	0	+	1	+	1
4.5	0	+	+	+	+
2.3	0	+	+	+	0
0.1	0	+	0	0	0

2438

19

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	+	0	+	0
16.17	0	+	+	+	+
14.15	+	1	3	2	1
12.13	1	7	17	8	3
10.11	1	5	14	7	2
8.9	+	3	8	5	1
6.7	+	1	2	2	1
4.5	0	+	+	+	+
2.3	0	+	+	+	+
0.1	0	0	+	0	0
-2.-1	0	0	0	0	0

2035

20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	+	0	0
18.19	+	+	+	0	0
16.17	+	1	+	0	0
14.15	+	1	1	+	0
12.13	+	3	2	+	+
10.11	1	4	3	+	+
8.9	1	8	5	1	+
6.7	1	9	9	3	+
4.5	+	6	7	4	+
≤3	1	6	11	9	+

4324

21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	+	0
22.23	0	+	+	+	0
20.21	0	+	2	1	+
18.19	+	2	5	4	1
16.17	1	5	9	6	1
14.15	+	4	8	4	1
12.13	1	5	10	5	2
10.11	+	3	6	4	1
8.9	0	1	2	3	1
6.7	+	+	1	1	+
4.5	0	0	+	+	+

3841

22

TEMP (°C)	0-3	4-10	11-21	22-33	≥
26.27	0	+	0	0	
24.25	0	+	+	+	
22.23	0	+	1	1	
20.21	+	2	6	5	
18.19	+	5	12	7	
16.17	+	5	11	7	
14.15	+	4	7	4	
12.13	+	2	4	3	
10.11	0	+	1	1	
8.9	0	+	+	+	
6.7	0	0	0	0	

29

26

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	0	0	0
22.23	0	+	1	+	+
20.21	+	1	2	1	+
18.19	1	5	11	6	1
16.17	1	11	19	8	1
14.15	1	6	9	4	1
12.13	+	2	3	3	1
10.11	+	+	+	+	+
8.9	0	0	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	+	0

2752

27

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	+	+	0	0
20.21	+	+	+	+	+
18.19	+	3	3	1	+
16.17	2	12	16	5	1
14.15	2	11	14	4	+
12.13	1	7	9	4	1
10.11	+	1	2	1	+
8.9	0	+	+	+	+
6.7	+	+	0	0	0
4.5	0	0	0	0	0

6756

28

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	0	0
22.23	+	+	+	0	0
20.21	+	1	+	+	0
18.19	1	3	4	1	0
16.17	4	18	14	2	+
14.15	4	16	13	3	+
12.13	2	6	6	1	+
10.11	+	1	1	1	+
8.9	0	+	+	+	0
6.7	0	0	+	+	0
4.5	0	0	0	0	0

3194

29

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	+	0	0
24.25	+	1	1	+	0
22.23	+	2	3	1	0
20.21	+	6	7	1	+
18.19	1	7	10	3	+
16.17	+	5	11	5	+
14.15	+	4	8	5	1
12.13	+	3	6	3	1
10.11	+	1	2	2	+
8.9	0	+	+	+	+
≤7	0	+	+	+	+

4277

30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	+	+	+	0
26.27	0	+	+	+	0
24.25	+	1	1	1	+
22.23	1	5	9	3	1
20.21	1	8	16	6	1
18.19	1	9	14	5	1
16.17	+	3	5	3	1
14.15	0	+	1	1	1
12.13	0	0	+	+	+
10.11	0	+	0	+	0

2381

31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	1	+	+
26.27	+	6	8	2	+
24.25	1	13	22	7	1
22.23	1	10	15	6	+
20.21	+	1	2	1	+
18.19	0	+	+	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2654

32

TEMP (°C)	0-3	4-10	11-21	22-33	≥
32.33	+	+	0	0	
30.31	+	+	+	0	
28.29	0	+	+	+	
26.27	+	2	5	2	
24.25	+	4	9	3	
22.23	2	15	30	9	
20.21	1	5	12	3	
18.19	+	1	2	1	
16.17	+	+	0	0	
14.15	0	+	0	0	
12.13	0	0	0	0	

51

36

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	0	+	0	0
34.35	0	0	+	0	0
32.33	0	+	1	+	0
30.31	+	2	2	1	+
28.29	1	10	20	5	+
26.27	1	12	25	10	1
24.25	+	1	3	2	+
22.23	0	+	+	+	+
20.21	0	+	0	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

4163

37

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	0	0	+	0	0
32.33	0	+	1	+	0
30.31	+	1	2	0	0
28.29	+	8	15	4	0
26.27	2	14	28	8	+
24.25	+	3	7	4	+
22.23	0	+	1	+	0
20.21	0	+	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

981

38

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
36.37	0	+	0	0	0
34.35	+	+	+	0	0
32.33	+	1	1	0	0
30.31	1	4	5	1	0
28.29	1	15	32	7	+
26.27	1	7	18	4	+
24.25	0	+	1	+	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0

2532

39

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	+	+	1	+	0
30.31	+	+	7	2	0
28.29	1	4	52	16	+
26.27	+	1	10	5	+
24.25	0	0	+	0	0
22.23	0	0	0	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

2405

40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	1	1	+	0
28.29	1	3	7	1	0
26.27	4	15	27	7	1
24.25	1	10	12	3	+
22.23	0	1	2	1	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

894

41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	+	1	2	+	0
26.27	1	8	32	8	0
24.25	2	9	25	9	1
22.23	+	+	1	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

446

42

TEMP (°C)	0-3	4-10	11-21	22-33	≥
30.31	0	0	+	0	
28.29	0	+	1	+	
26.27	0	1	2	0	
24.25	+	3	5	1	
22.23	+	11	29	5	
20.21	1	7	23	5	
18.19	0	1	3	1	
16.17	0	+	+	0	
14.15	0	0	0	0	
12.13	0	0	0	0	
10.11	0	0	0	0	

104

Graphs represent the objective compilation of available data for specified areas without regard to suspec
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bias w

RATURE

DECEMBER

INSUFFICIENT DATA

WIND SPEED (KTS)

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
18.19	0	0	0	+	0
16.17	0	+	1	2	1
14.15	+	+	2	3	2
12.13	+	1	5	6	2
10.11	+	2	6	5	2
8.9	1	3	10	9	4
6.7	+	2	5	9	2
4.5	0	1	3	3	2
2.3	0	+	1	4	2
0.1	0	0	0	+	+
-2.-1	0	0	0	0	0

1352

WIND SPEED (KTS) 2

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	0	+	1	0
4.5	1	1	1	1	+
2.3	1	7	11	3	+
0.1	1	5	15	6	+
-2.-1	+	2	8	4	+
-4.-3	+	2	6	3	+
-6.-5	+	2	5	3	+
-8.-7	0	1	2	2	1
-10.-9	0	+	+	1	+
-12.-11	0	0	+	+	0
-14.-13	0	0	0	+	0

1071

WIND SPEED (KTS) 3

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
4.5	0	0	1	1	0
2.3	0	0	1	1	1
0.1	2	6	3	2	2
-2.-1	1	7	10	2	1
-4.-3	1	6	15	3	3
-6.-5	1	4	8	3	2
-8.-7	1	3	2	2	1
-10.-9	1	1	1	0	0
-12.-11	2	2	2	0	0
-14.-13	0	0	2	1	0
-16.-15	0	1	0	0	0

187

WIND SPEED (KTS) 4

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	0	0	+	+	0
4.5	0	+	1	1	+
2.3	+	1	2	2	+
0.1	1	4	9	4	1
-2.-1	2	6	10	6	1
-4.-3	1	6	7	4	1
-6.-5	1	4	6	3	1
-8.-7	+	3	2	+	+
-10.-9	+	+	1	+	+
-12.-11	+	+	+	1	+
-14.-13	0	0	+	0	0

812

WIND SPEED (KTS) 5

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
6.7	1	1	+	1	1
4.5	1	3	5	3	1
2.3	4	13	12	6	1
0.1	1	9	11	7	1
-2.-1	1	4	6	4	+
-4.-3	0	+	1	1	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0
-10.-9	0	0	0	0	0
-12.-11	0	0	0	0	0
-14.-13	0	0	0	0	0

439

WIND SPEED (KTS) 9

-21	22-33	≥ 34
+	+	0
2	+	+
2	1	0
2	1	+
6	2	1
9	5	1
9	7	1
8	5	1
4	2	+
3	2	+

837

WIND SPEED (KTS) 10

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
10.11	0	+	0	0	+
8.9	0	0	+	+	+
6.7	0	1	2	2	1
4.5	+	2	5	4	2
2.3	+	4	12	10	4
0.1	+	2	9	8	5
-2.-1	0	2	7	5	5
-4.-3	+	1	3	2	1
-6.-5	0	0	+	+	+
-8.-7	0	0	+	0	0
-10.-9	0	0	0	0	0

1251

WIND SPEED (KTS) 11

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	0	+	0
10.11	0	+	+	+	+
8.9	0	+	1	1	+
6.7	+	2	6	3	1
4.5	+	5	10	7	4
2.3	+	7	13	11	5
0.1	+	3	5	6	3
-2.-1	+	1	1	1	+
-4.-3	0	+	+	+	+
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1866

WIND SPEED (KTS) 12

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	0	0
10.11	0	0	+	0	0
8.9	+	1	1	1	+
6.7	+	3	9	6	2
4.5	1	7	15	9	5
2.3	1	8	13	11	3
0.1	+	2	4	2	1
-2.-1	0	+	1	+	+
-4.-3	0	+	+	+	0
-6.-5	0	0	0	0	0
-8.-7	0	0	0	0	0

1560

WIND SPEED (KTS) 13

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
12.13	0	0	+	+	0
10.11	0	0	+	+	0
8.9	0	+	1	1	+
6.7	+	3	9	6	2
4.5	1	9	16	12	3
2.3	1	5	10	7	3
0.1	+	1	3	2	1
-2.-1	0	1	1	1	0
-4.-3	0	+	0	+	+
-6.-5	0	0	0	0	+
-8.-7	0	0	0	0	+

1606

WIND SPEED (KTS) 14

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
14.15	0	+	+	+	0
12.13	0	+	+	+	+
10.11	+	1	3	4	2
8.9	1	5	17	10	4
6.7	1	6	14	10	3
4.5	+	1	5	4	1
2.3	+	1	2	2	1
0.1	0	+	+	+	+
-2.-1	0	+	+	0	+
-4.-3	0	0	0	+	+
-6.-5	0	0	0	0	0

2560

WIND SPEED (KTS) 15

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	+	+	0
14.15	0	+	+	+	0
12.13	+	1	2	+	+
10.11	+	1	2	+	+
8.9	+	2	5	1	+
6.7	+	3	10	3	+
4.5	+	3	10	5	1
2.3	+	3	12	9	1
≤1	+	3	8	9	3

3566

WIND SPEED (KTS) 19

-21	22-33	≥ 34
0	+	0
+	+	0
3	2	1
17	8	3
14	7	2
8	5	1
2	2	1
+	+	+
+	+	+
+	0	0
0	0	0

2035

WIND SPEED (KTS) 20

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
22.23	0	+	0	0	0
20.21	0	+	+	+	0
18.19	+	+	+	0	0
16.17	+	1	+	0	0
14.15	+	1	1	+	0
12.13	+	3	2	+	+
10.11	1	4	3	+	+
8.9	1	8	5	1	+
6.7	1	9	9	3	+
4.5	+	6	7	4	+
≤3	1	6	11	9	+

4324

WIND SPEED (KTS) 21

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	0	+	0
22.23	0	+	+	+	+
20.21	0	+	2	1	+
18.19	+	2	5	4	1
16.17	1	5	9	6	1
14.15	+	4	8	4	1
12.13	1	5	10	5	2
10.11	+	3	6	4	1
8.9	0	1	2	3	1
6.7	+	+	1	1	+
4.5	0	0	+	+	+

3841

WIND SPEED (KTS) 22

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	+	0	0	0
24.25	0	+	+	+	0
22.23	0	+	1	1	+
20.21	+	2	6	5	1
18.19	+	5	12	7	2
16.17	+	5	11	7	1
14.15	+	4	7	4	1
12.13	+	2	4	3	1
10.11	0	+	1	1	1
8.9	0	+	+	+	+
6.7	0	0	0	0	0

2990

WIND SPEED (KTS) 23

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	+	+	0	0	0
24.25	0	0	+	+	0
22.23	0	+	+	+	+
20.21	+	1	2	2	1
18.19	+	2	8	9	3
16.17	1	7	13	9	4
14.15	+	4	8	7	2
12.13	+	3	6	4	2
10.11	+	0	1	1	1
8.9	0	0	0	+	+
6.7	0	0	0	0	0

2155

WIND SPEED (KTS) 24

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	0	+	+	0	0
22.23	0	+	+	0	0
20.21	0	+	2	1	+
18.19	+	3	7	4	2
16.17	+	7	14	6	3
14.15	+	6	11	6	2
12.13	+	4	6	6	1
10.11	+	1	1	2	1
8.9	0	0	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0

1685

WIND SPEED (KTS) 25

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
24.25	+	0	+	0	+
22.23	0	+	+	+	0
20.21	+	1	1	2	+
18.19	+	4	12	5	1
16.17	+	7	14	8	3
14.15	+	4	9	5	2
12.13	+	3	6	5	1
10.11	0	+	1	2	+
8.9	0	0	+	+	+
6.7	0	0	0	0	0
4.5	0	0	0	0	0

2256

WIND SPEED (KTS) 29

-21	22-33	≥ 34
+	0	0
1	+	0
3	1	0
7	1	+
10	3	+
11	5	+
8	5	1
6	3	1
2	2	+
+	+	+
+	+	+

4277

WIND SPEED (KTS) 30

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	+	+	0	0
28.29	0	+	+	+	0
26.27	0	+	+	+	0
24.25	+	1	1	1	+
22.23	1	5	9	3	1
20.21	1	8	16	6	1
18.19	1	9	14	5	1
16.17	+	3	5	3	1
14.15	0	+	1	1	1
12.13	0	0	+	+	+
10.11	0	+	0	+	0

2381

WIND SPEED (KTS) 31

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	0	+	+	0	0
30.31	+	+	+	+	0
28.29	+	1	1	+	+
26.27	+	6	8	2	+
24.25	1	13	22	7	1
22.23	1	10	15	6	+
20.21	+	1	2	1	+
18.19	0	+	+	+	+
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

2654

WIND SPEED (KTS) 32

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	0	0	0
30.31	0	0	0	0	0
28.29	0	+	+	+	0
26.27	+	1	2	+	0
24.25	+	4	9	3	+
22.23	2	15	30	9	+
20.21	1	5	12	3	+
18.19	+	1	2	1	+
16.17	+	+	+	0	+
14.15	0	+	0	0	0
12.13	0	0	0	0	0

5150

WIND SPEED (KTS) 33

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
26.27	0	0	+	+	0
24.25	+	1	+	+	0
22.23	1	5	10	3	+
20.21	1	12	27	6	+
18.19	1	9	16	4	+
16.17	+	1	1	1	+
14.15	0	+	0	+	+
12.13	0	0	0	0	0
10.11	0	0	0	0	0
8.9	0	0	0	0	0
6.7	0	0	0	0	0

1997

WIND SPEED (KTS) 34

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	+	0
32.33	+	+	1	+	0
30.31	+	1	3	+	0
28.29	+	3	13	3	+
26.27	+	7	30	14	1
24.25	+	2	10	8	1
22.23	0	+	1	+	+
20.21	0	0	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

5699

WIND SPEED (KTS) 35

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	+	+	+	+
28.29	+	1	2	1	+
26.27	1	4	12	8	1
24.25	+	4	17	17	3
22.23	+	1	7	12	3
20.21	+	+	1	3	1
18.19	0	+	+	+	+
16.17	0	0	+	0	0
14.15	0	0	+	0	0
12.13	0	0	0	0	0

6957

WIND SPEED (KTS) 39

-21	22-33	≥ 34
+	0	0
1	+	0
7	2	0
52	16	+
10	5	+
+	0	0
0	0	0
0	0	0
0	0	0
0	0	0

2405

WIND SPEED (KTS) 40

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
32.33	+	+	+	0	0
30.31	+	1	1	+	0
28.29	1	3	7	1	0
26.27	4	15	27	7	1
24.25	1	10	12	3	+
22.23	0	1	2	1	0
20.21	0	+	+	+	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0

894

WIND SPEED (KTS) 41

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	+	1	2	+	0
26.27	1	8	32	8	0
24.25	2	9	25	9	1
22.23	+	+	1	+	0
20.21	0	0	+	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

446

WIND SPEED (KTS) 42

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
30.31	0	0	+	0	0
28.29	0	+	1	+	0
26.27	0	1	2	0	0
24.25	+	3	5	1	0
22.23	+	11	29	5	0
20.21	1	7	23	5	1
18.19	0	1	3	1	+
16.17	0	+	+	0	0
14.15	0	0	0	0	0
12.13	0	0	0	0	0
10.11	0	0	0	0	0

1049

WIND SPEED (KTS) 43

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	+	+	0	0
32.33	+	+	+	0	0
30.31	+	1	1	0	0
28.29	2	7	5	+	0
26.27	5	27	21	+	0
24.25	2	12	11	+	0
22.23	+	1	2	+	0
20.21	0	+	+	0	0
18.19	0	0	+	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

1000

WIND SPEED (KTS) 44

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	0	0	+	0	0
32.33	0	+	+	+	0
30.31	+	1	+	+	0
28.29	1	7	9	1	0
26.27	3	21	31	5	+
24.25	1	6	9	2	+
22.23	+	+	+	+	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

4576

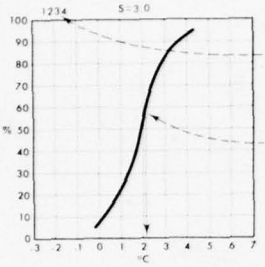
WIND SPEED (KTS) 45

TEMP (°C)	0-3	4-10	11-21	22-33	≥ 34
34.35	+	+	0	0	0
32.33	0	+	0	0	0
30.31	1	3	1	0	0
28.29	19	26	5	0	0
26.27	12	24	4	+	0
24.25	+	2	1	0	0
22.23	0	+	+	0	0
20.21	0	0	0	0	0
18.19	0	0	0	0	0
16.17	0	0	0	0	0
14.15	0	0	0	0	0

467

bjective compilation of available data for specified areas without regard to suspected biases.
pposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER



Sea surface temperature

Number of observations

Cumulative percent frequency of sea surface temperatures equal to or less than the temperature intersected by the curve.

(60% of all observed sea surface temperatures were ≤2.1°C or ≤35.8°F.)

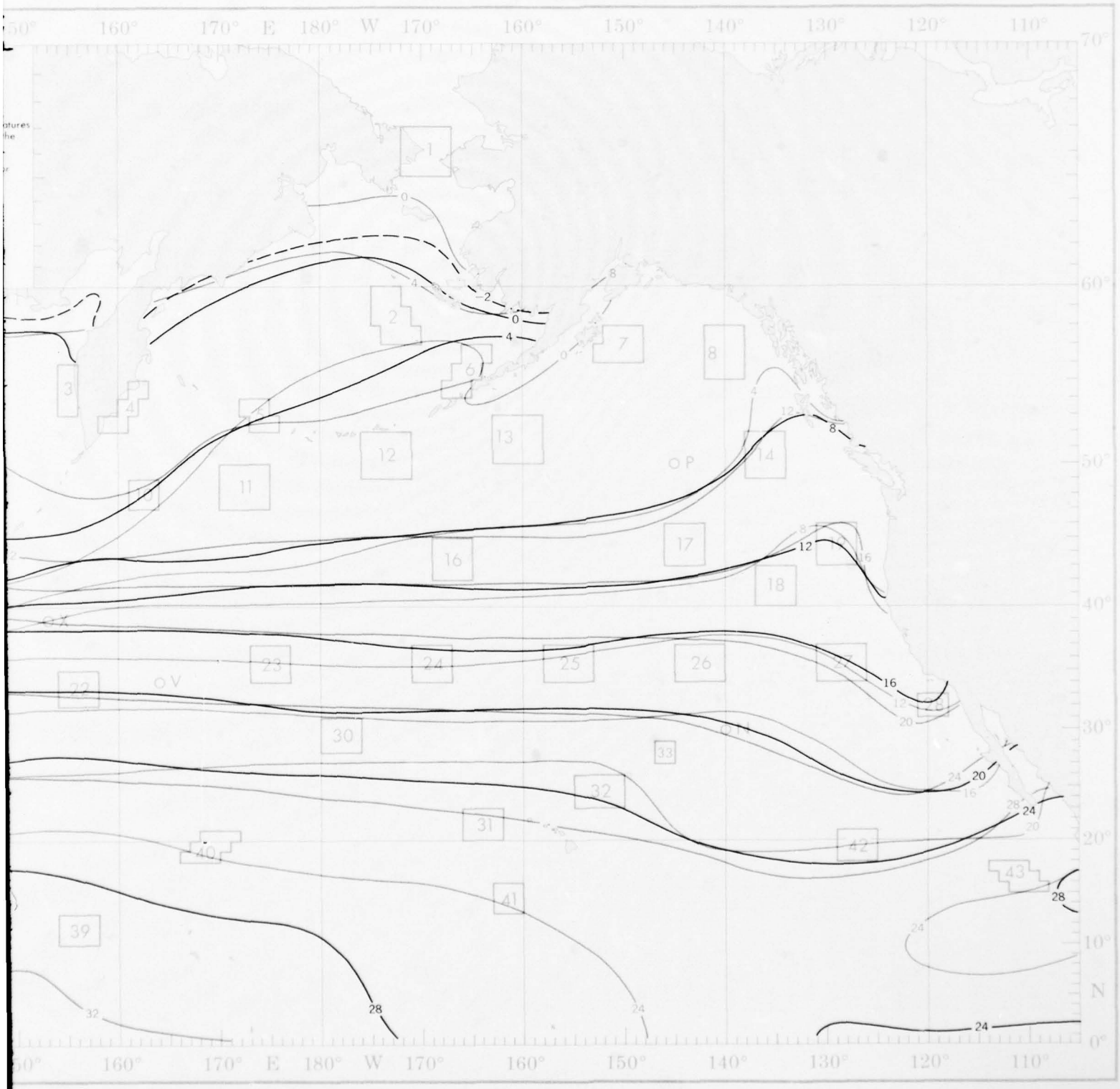
S Standard deviation of sea surface temperatures (°C)

BLACK LINE Mean sea surface temperature (°C)

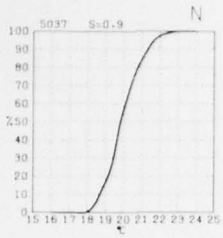
BLUE LINE Minimum (1%) sea surface temperature (°C) (1% of the temperatures were equal to or less than the given value)

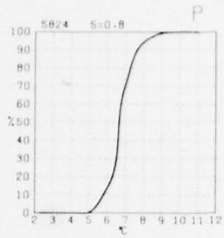
RED LINE Maximum (99%) sea surface temperature (°C) (1% of the temperatures were greater than the given value)

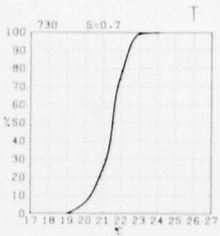
SEA SURFACE TEMPERATURE

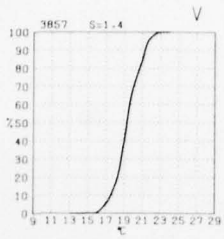


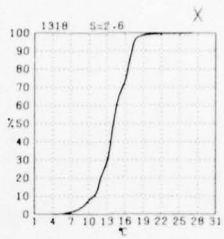
SEA SURFACE TEMPERATURE



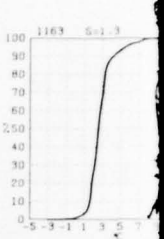


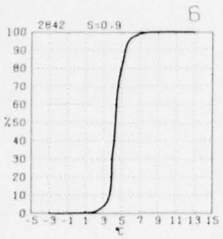


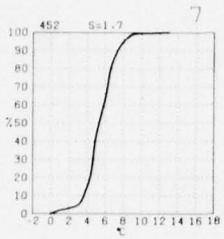


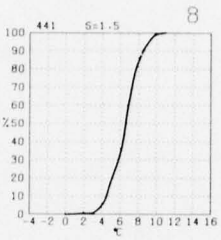


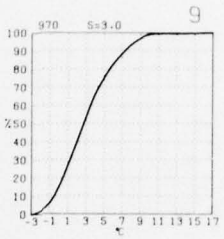
INSUFFICIENT DATA

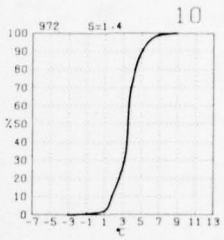


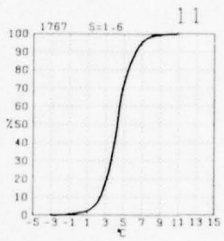


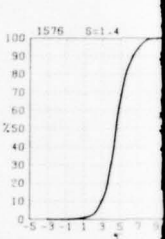


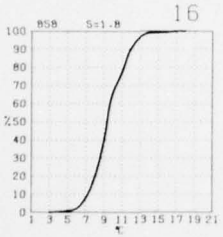


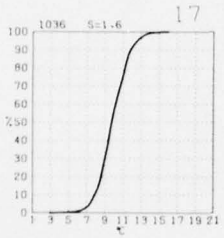


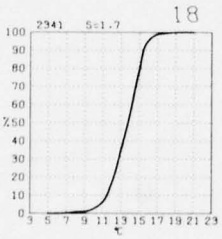


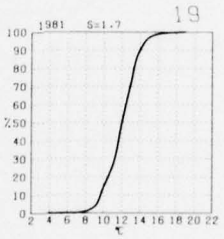


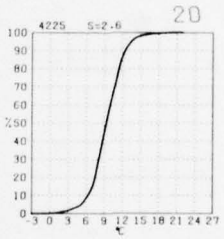


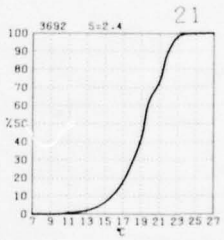


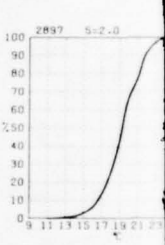


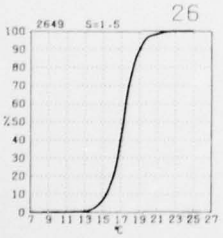


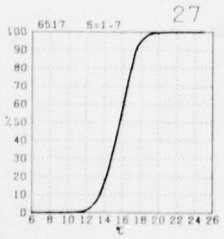


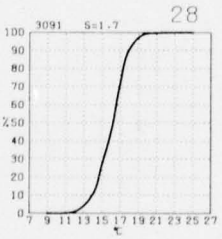


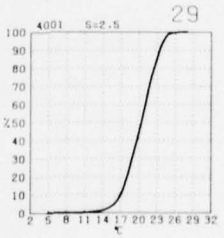


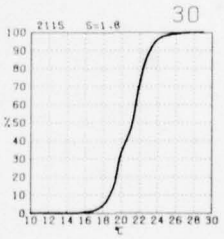


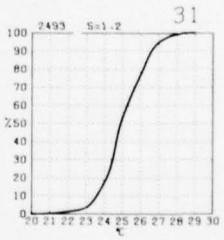


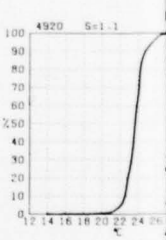


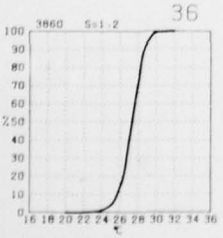


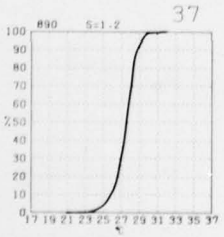


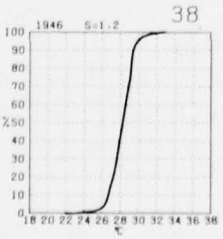


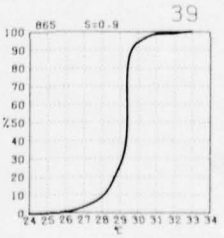


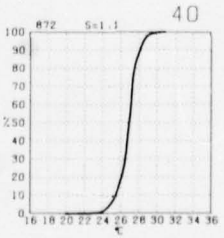


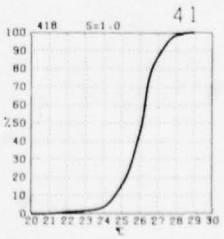


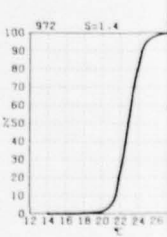








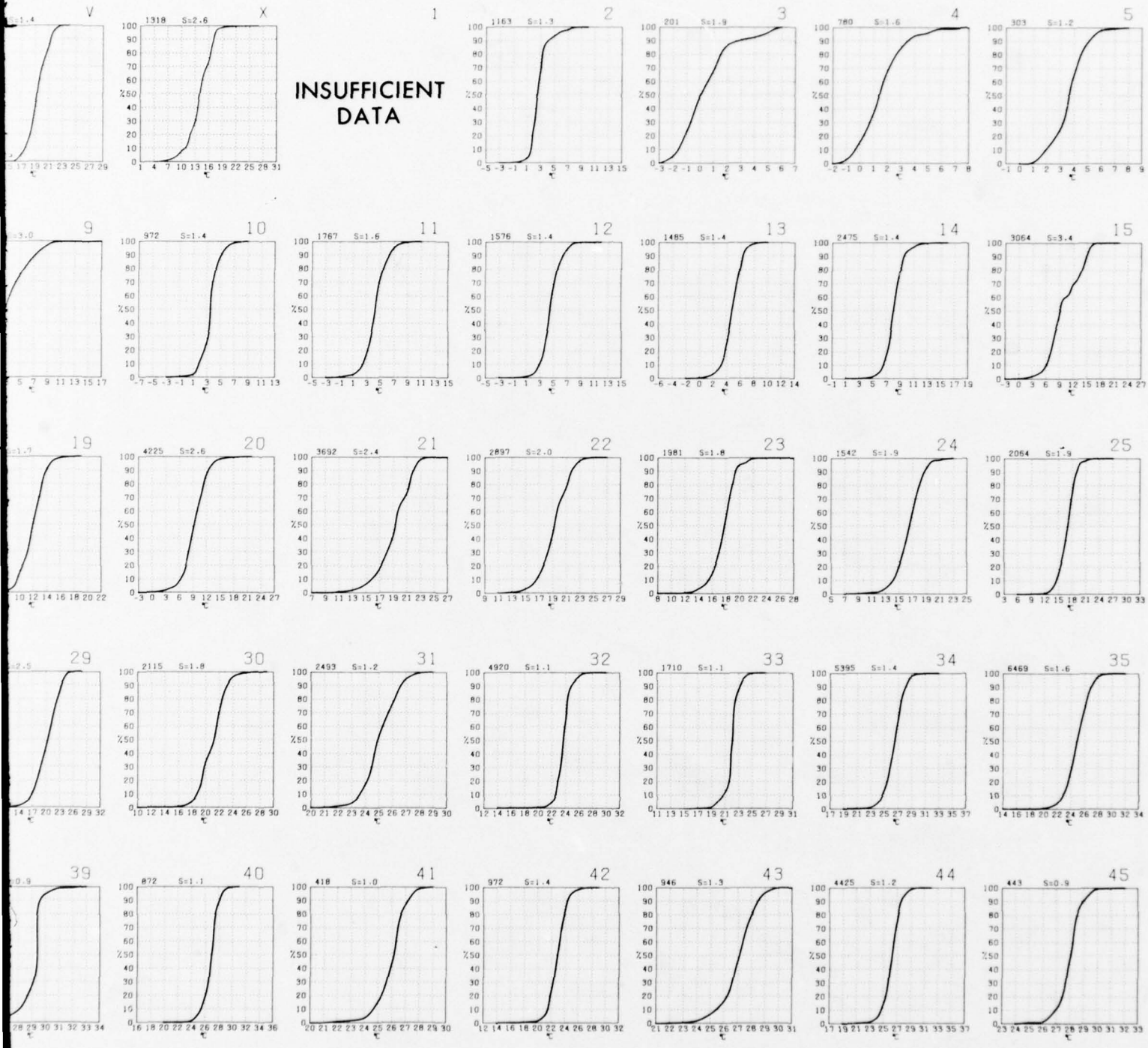




Graphs represent the objective compilation of available data for specified areas without regard to su
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where bi

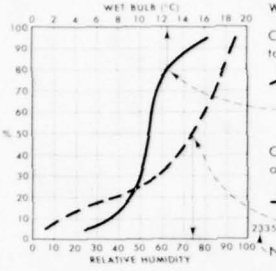
E

DECEMBER



he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER



Wet bulb - Relative humidity

Cumulative percent frequency of wet-bulb temperatures equal to or less than the temperature intersected by the curve (top scale).

Wet bulb (°C)

(80% of all observed wet-bulb temperatures were ≤12.5°C or 54.5°F.)

Cumulative percent frequency of relative humidities equal to or less than the humidity intersected by the curve (bottom scale).

Relative humidity (%)

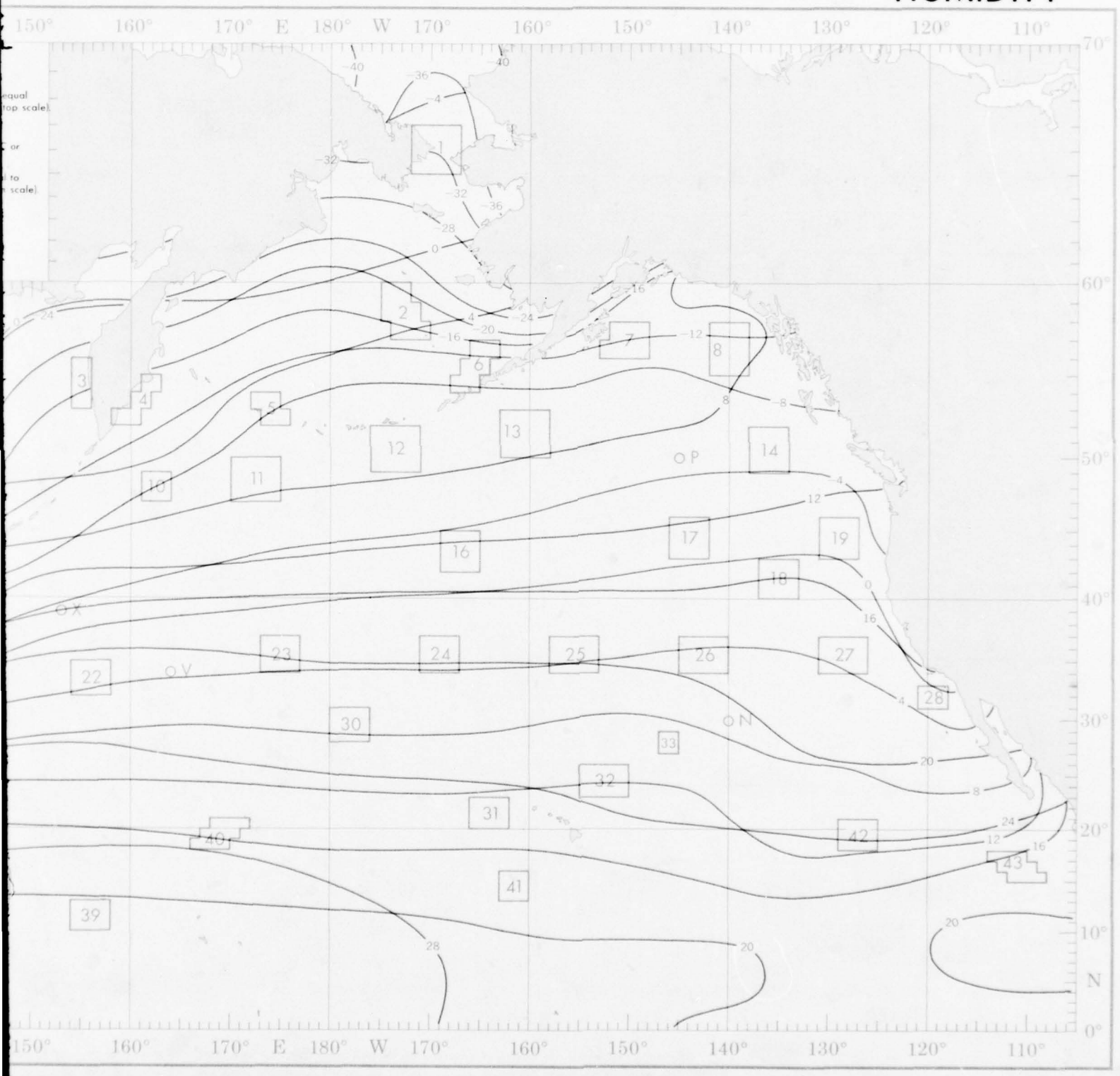
(50% of all observed relative humidities were ≤74%.)

Number of observations

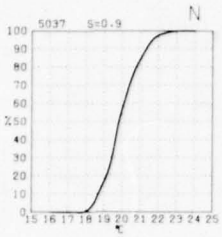
BLUE LINE — Minimum (1%) dew point temperature (°C) (1% of the computed values were equal to or less than the given value)

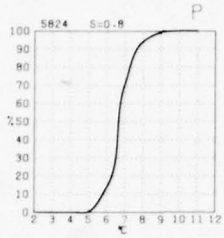
RED LINE — Maximum (99%) dew point temperature (°C) (1% of the computed values were greater than the given value)

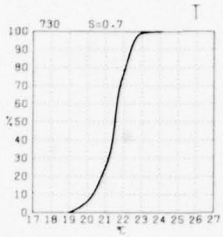
HUMIDITY

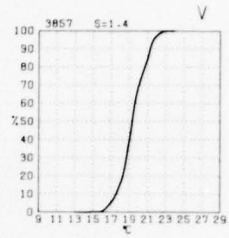

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° N 0°
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 31 32 33 39 40 41 42 43
O P O X O Y O N
-40 -36 -32 -28 -24 -20 -16 -12 -8 -4 0 4 8 12 16 20 24 28 36 40

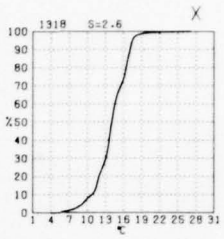
SEA SURFACE TEMPERATURE





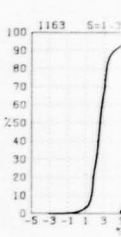


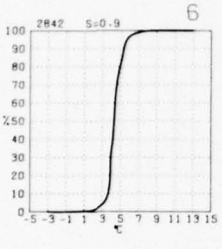


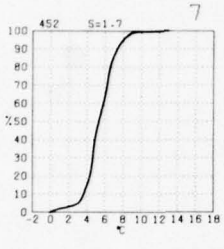


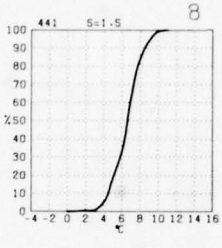
INSUFFICIENT DATA

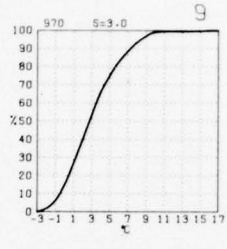
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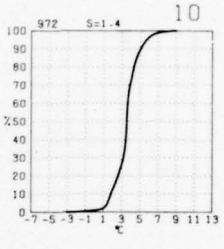


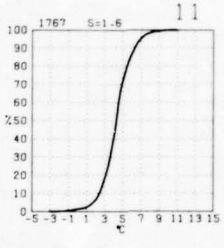


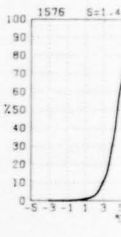


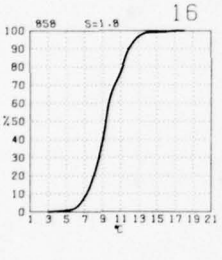


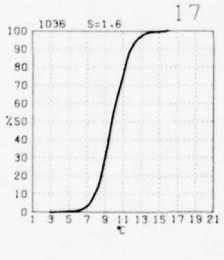


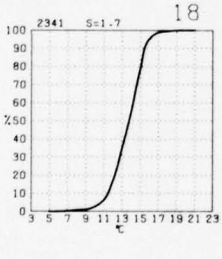


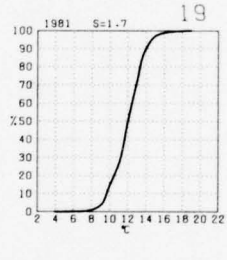


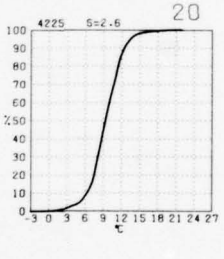


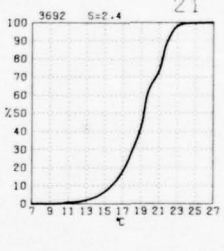


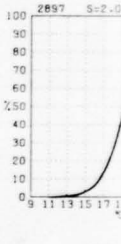


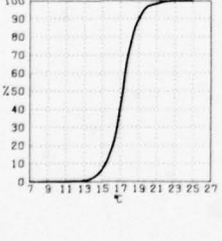


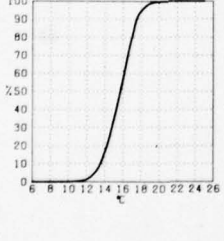


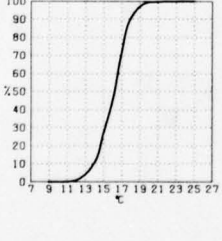


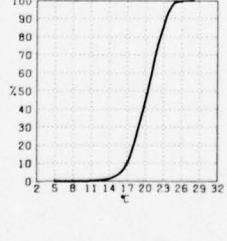


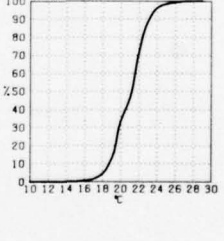


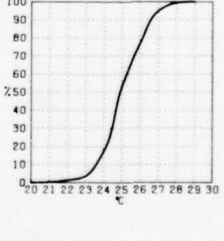


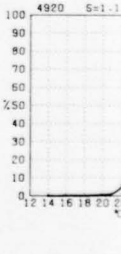


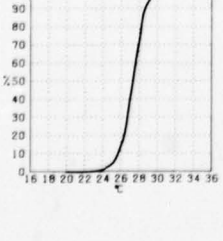


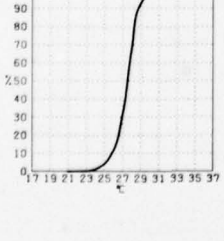


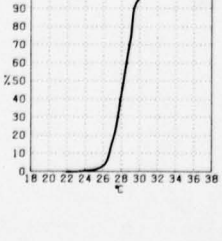


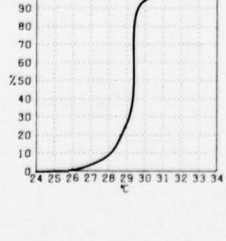


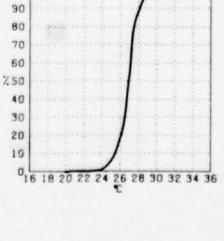


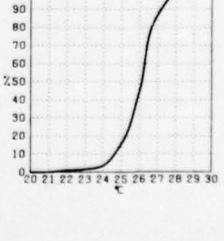


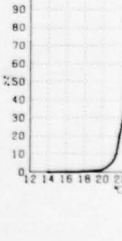










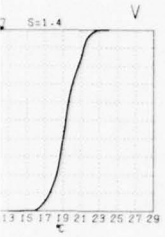


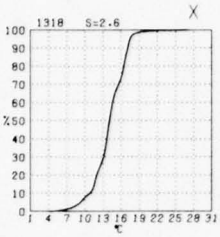
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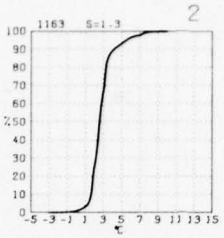
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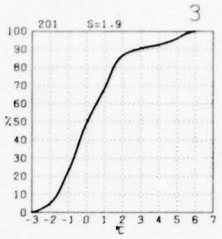
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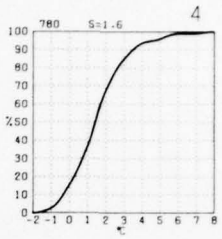
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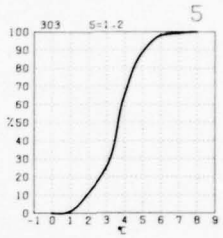




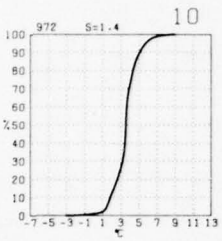


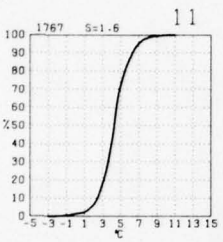


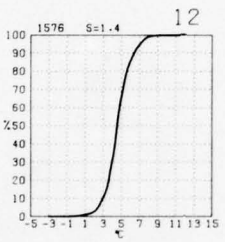


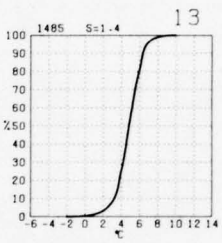


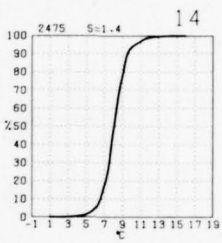


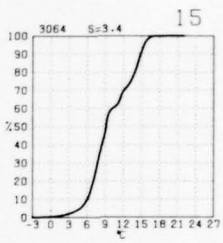




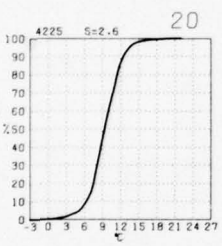


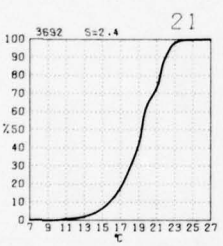


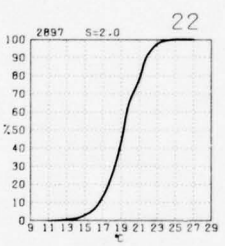


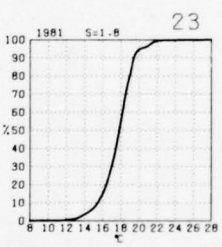


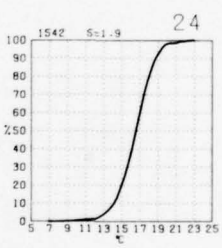


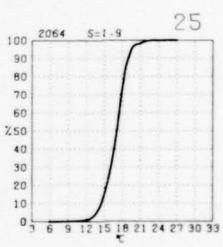




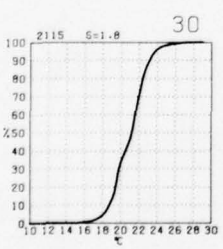


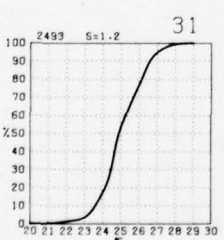


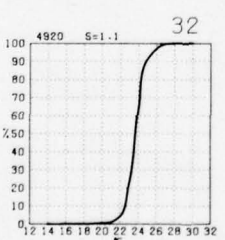


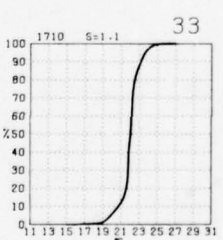


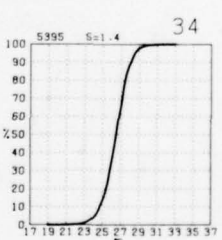


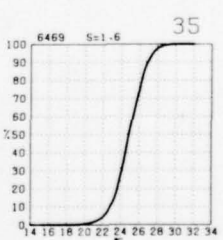


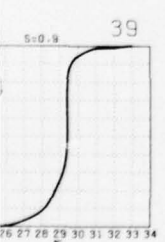


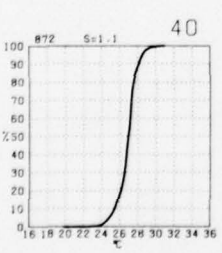


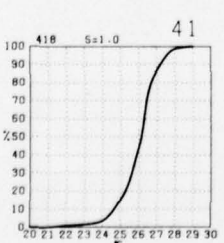


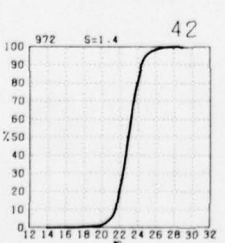


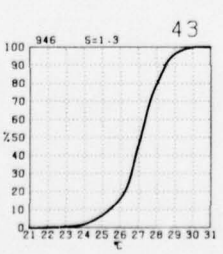


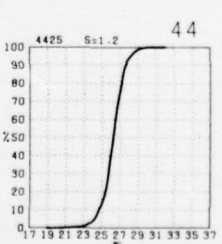


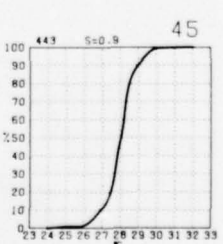






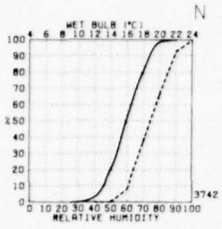


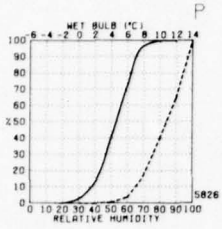


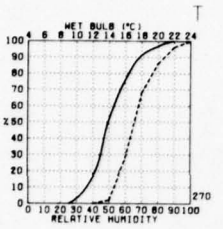


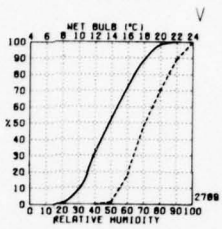
nt the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

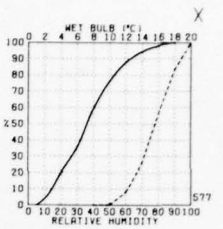
WET BULB AND RELATIVE HUMIDITY



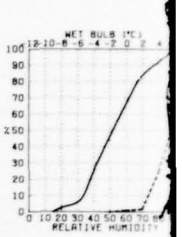


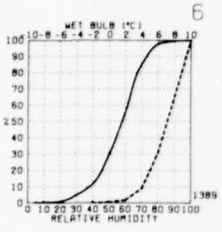


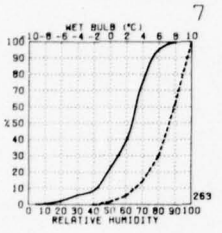


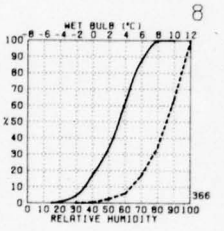


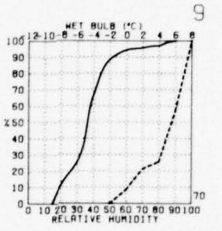
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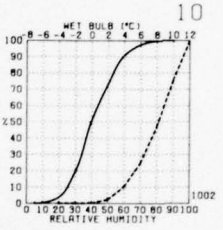


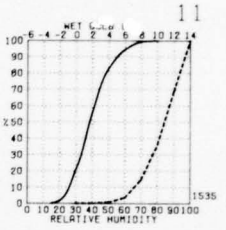


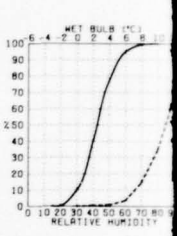


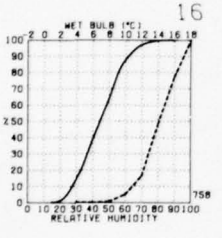


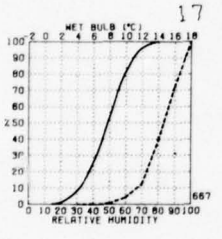


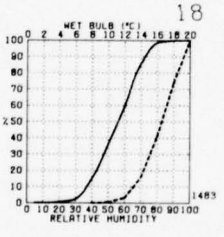


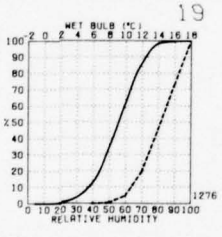


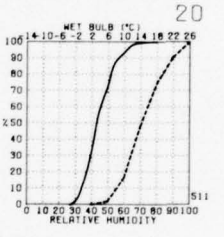


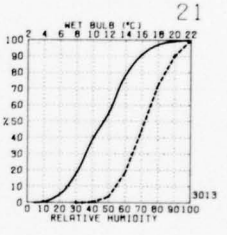


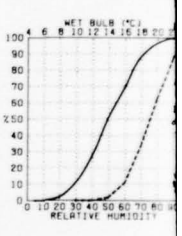


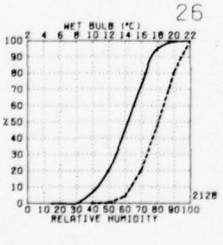


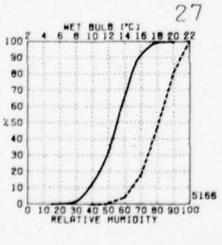


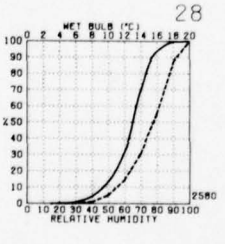


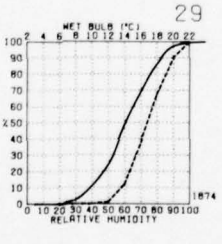


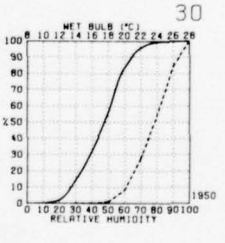


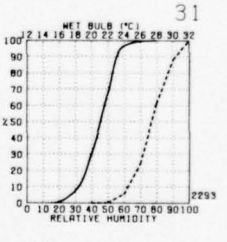


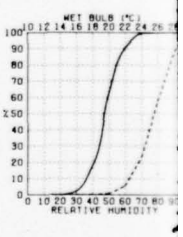


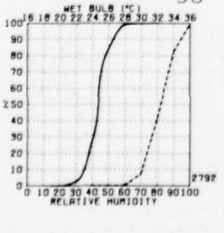


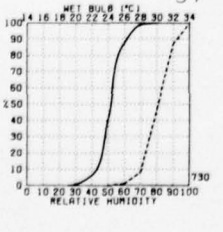


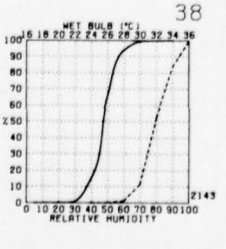


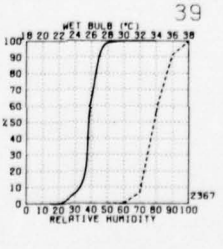


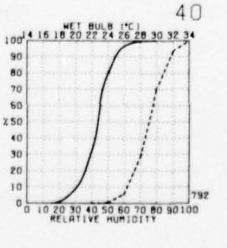


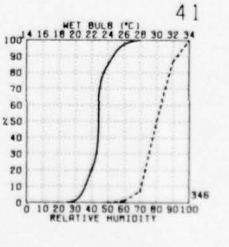


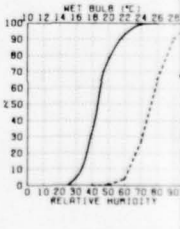










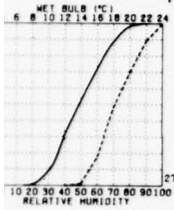


Graphs represent the objective compilation of available data for specified areas without regard to susp
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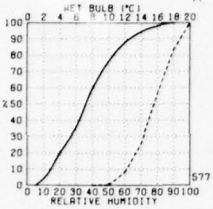
HUMIDITY

DECEMBER

V



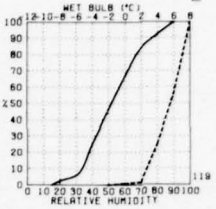
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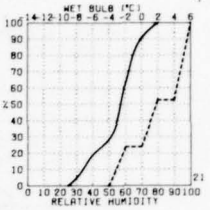
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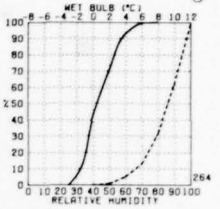
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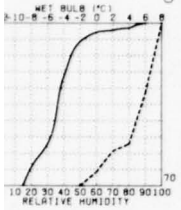
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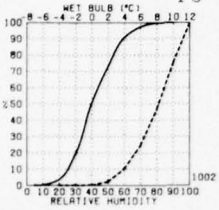
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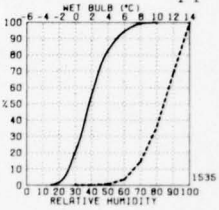
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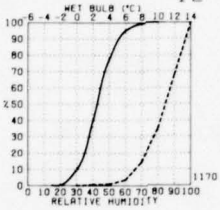
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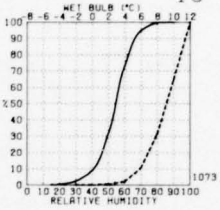
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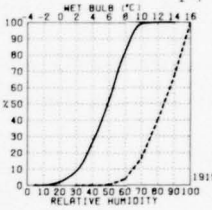
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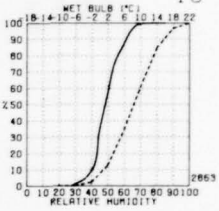
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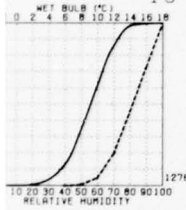
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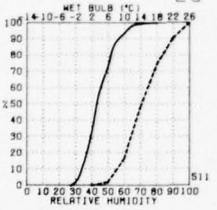
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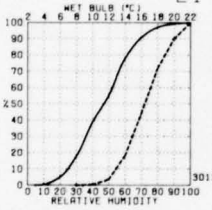
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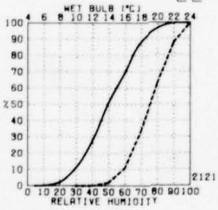
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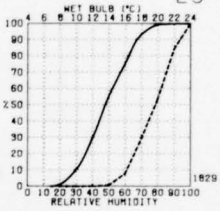
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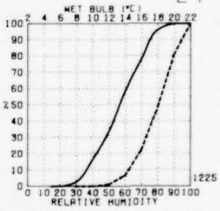
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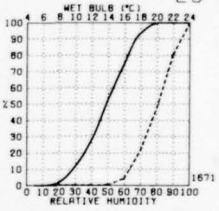
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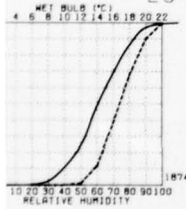
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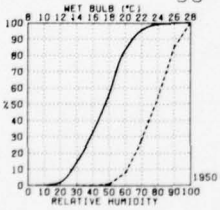
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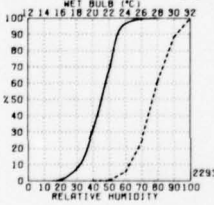
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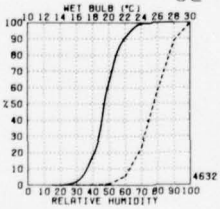
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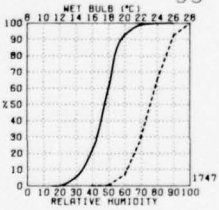
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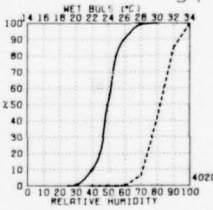
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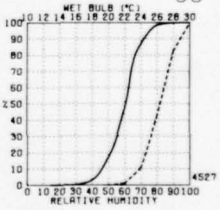
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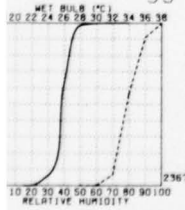
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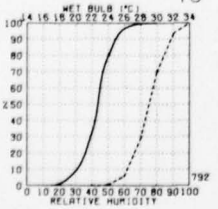
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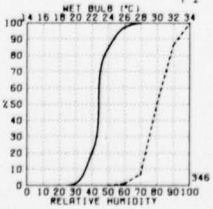
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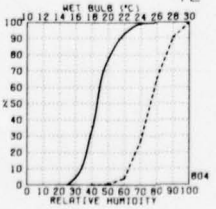
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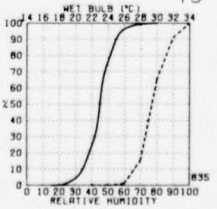
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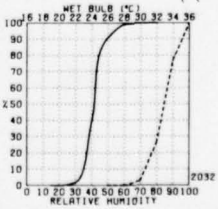
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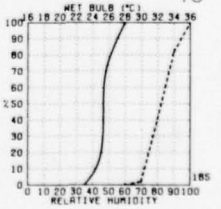
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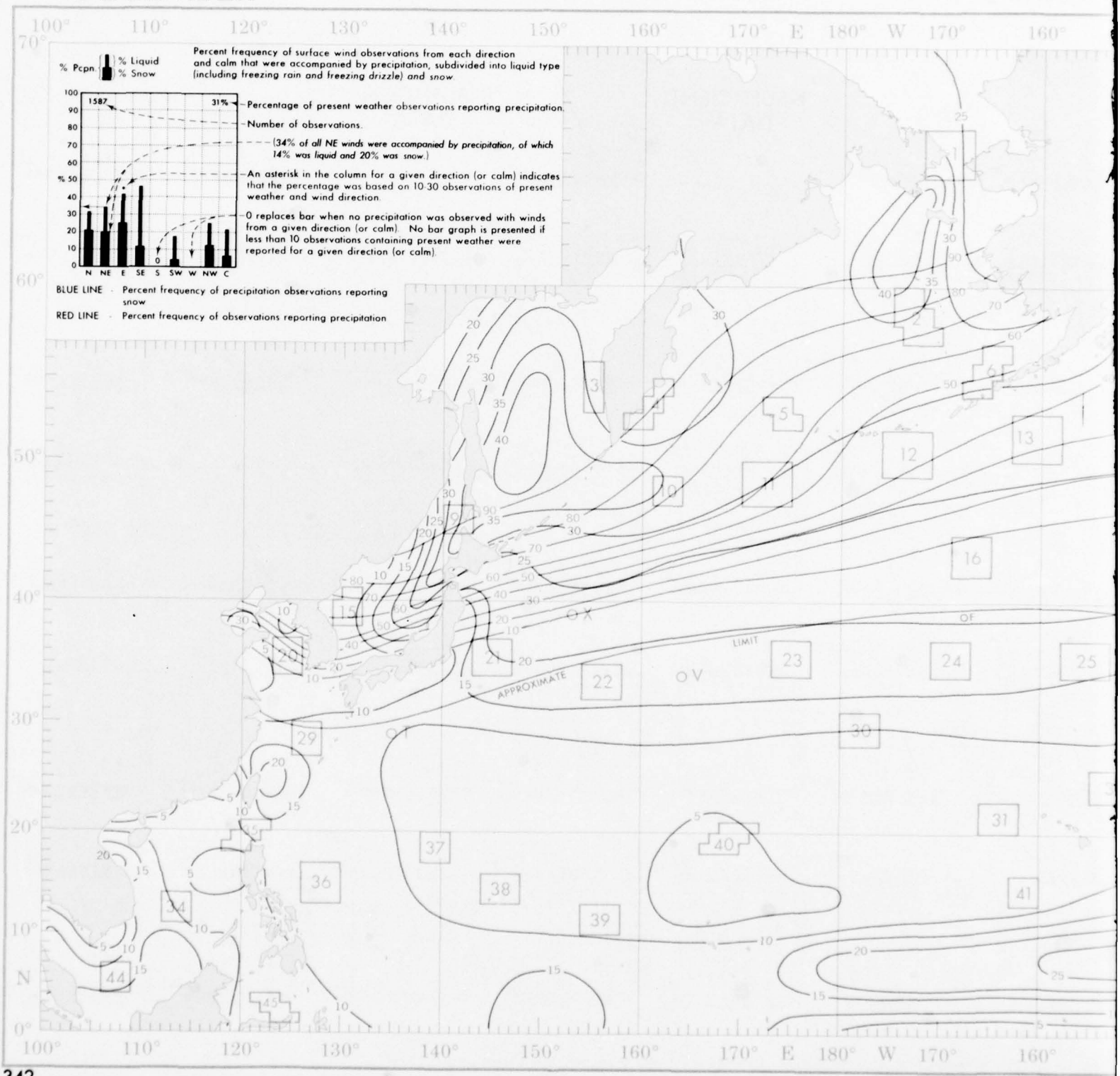


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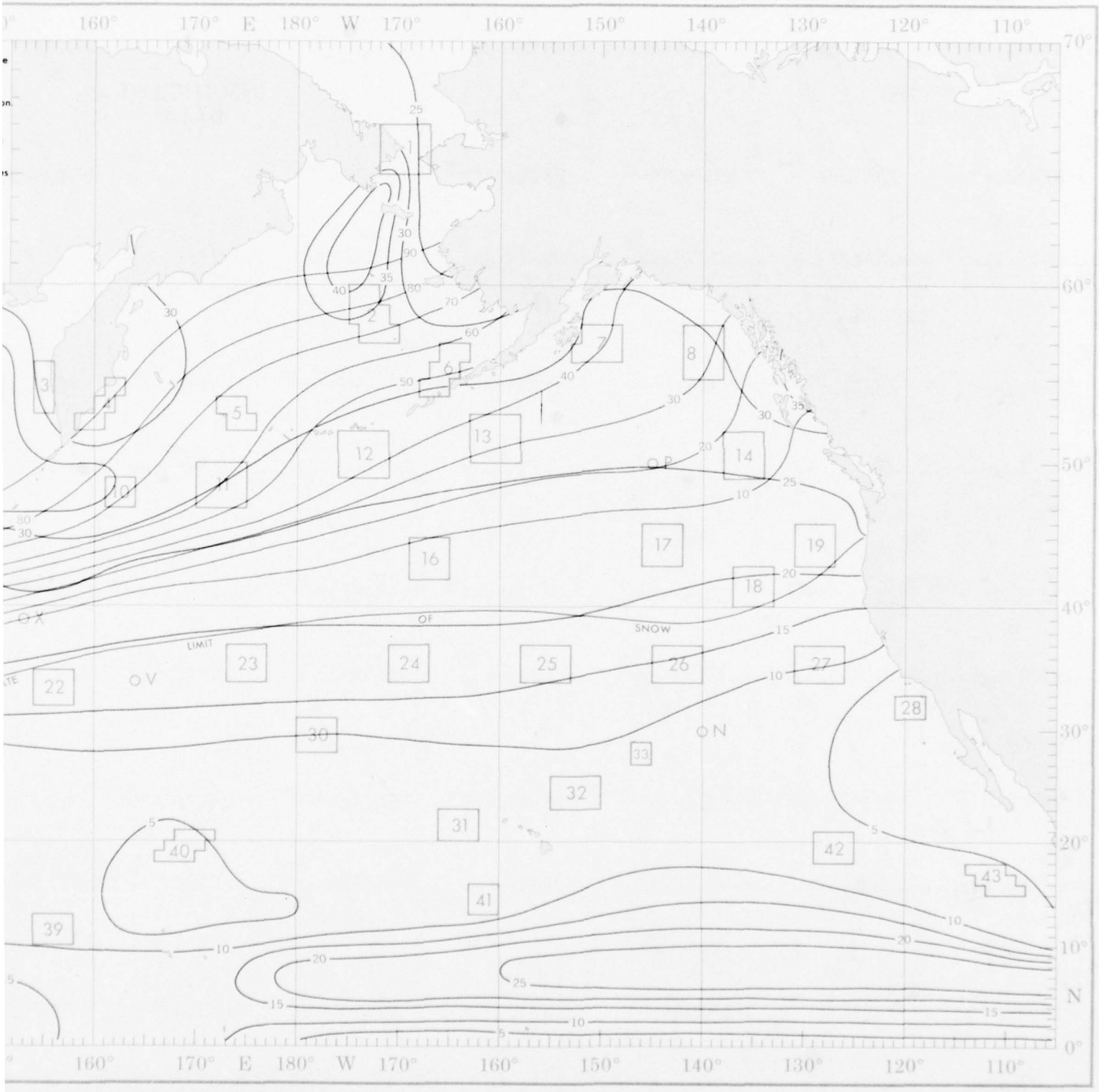


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analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

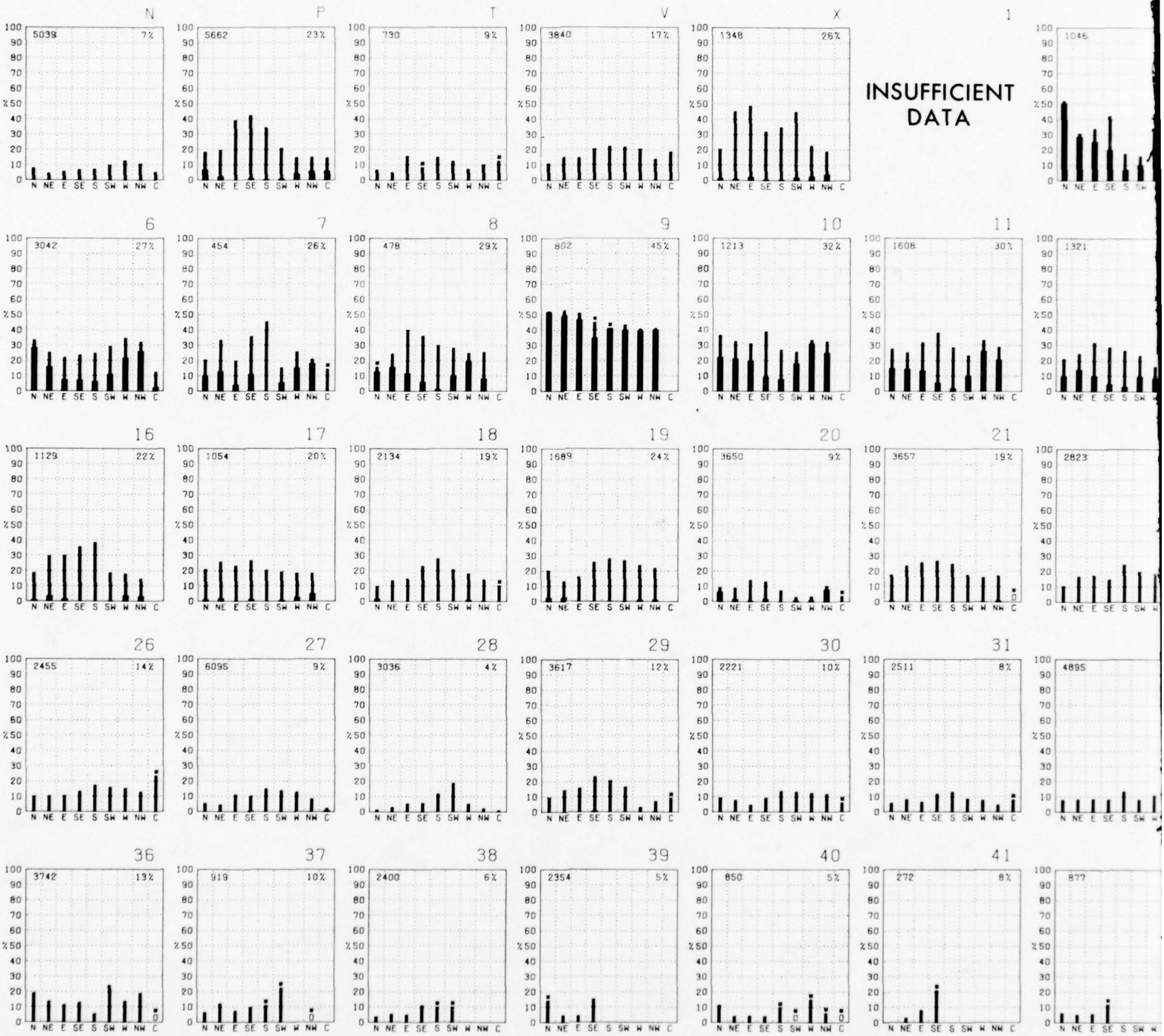
DECEMBER


% Pcpn.
% Liquid
% Snow
Percent frequency of surface wind observations from each direction and calm that were accompanied by precipitation, subdivided into liquid type (including freezing rain and freezing drizzle) and snow.
1587
31%
Percentage of present weather observations reporting precipitation.
Number of observations.
(34% of all NE winds were accompanied by precipitation, of which 14% was liquid and 20% was snow.)
An asterisk in the column for a given direction (or calm) indicates that the percentage was based on 10-30 observations of present weather and wind direction.
0 replaces bar when no precipitation was observed with winds from a given direction (or calm). No bar graph is presented if less than 10 observations containing present weather were reported for a given direction (or calm).
N NE E SE S SW W NW C
BLUE LINE - Percent frequency of precipitation observations reporting snow
RED LINE - Percent frequency of observations reporting precipitation
LIMIT
APPROXIMATE
OF
OV
OX

PRECIPITATION

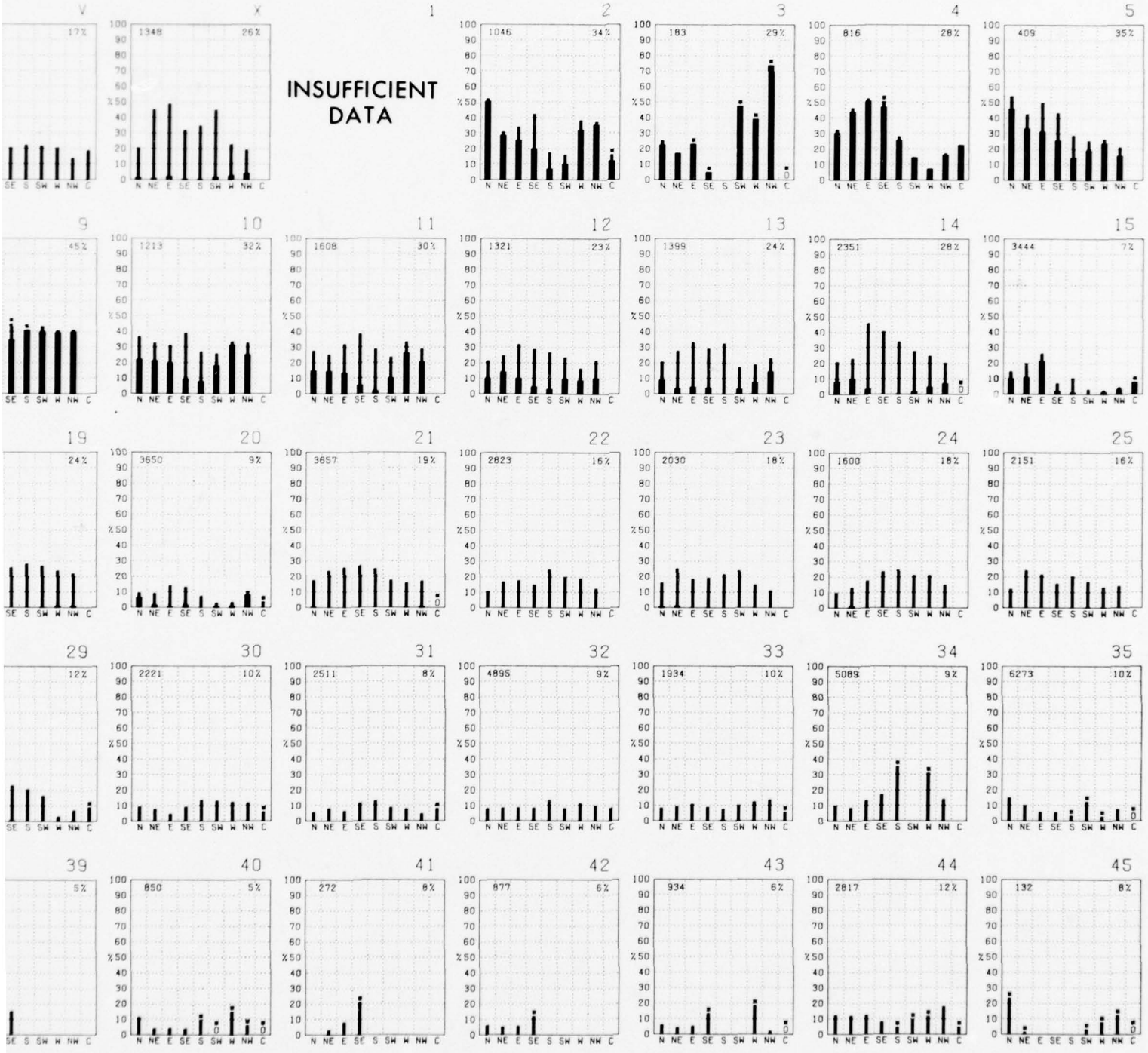


PRECIPITATION



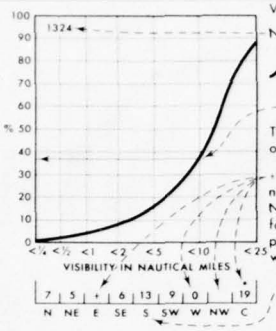
Graphs represent the objective compilation of available data for specified areas without regard to sus
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DECEMBER



...e objective compilation of available data for specified areas without regard to suspected biases.
...es (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER



Visibility.

Number of observations.

Cumulative percent frequency of visibilities less than the visibility intersected by the curve.

(37% of all visibilities reported were <10 nautical miles.)

The table below the graph indicates percent frequency of occurrence of visibility <2 nautical miles versus wind direction.

+ indicates < 5% but >0. 0 indicates that no visibilities <2 nautical miles were observed with winds from a direction or calm. No percentage is given if less than 10 observations were available for visibility and wind direction. An asterisk indicates that the percentage was based on 10-30 observations of visibility and wind direction.

(13% of all S winds were accompanied by visibilities <2 nautical miles.)

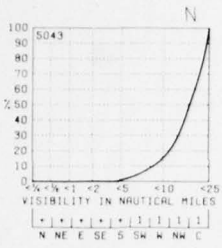
BLUE LINE – Percent frequency of visibilities ≥5 nautical miles

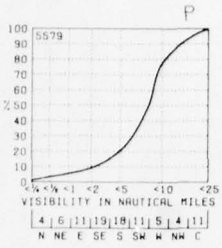
RED LINE – Percent frequency of visibilities <2 nautical miles

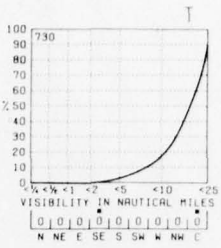
VISIBILITY

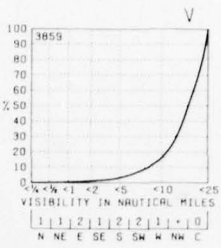

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70°
60°
50°
40°
30°
20°
10°
0°
N
1
2
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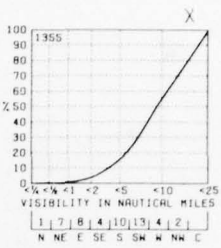
VISIBILITY



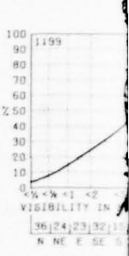


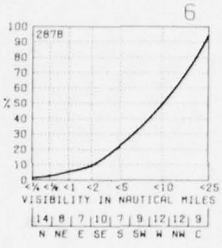


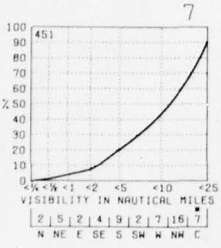


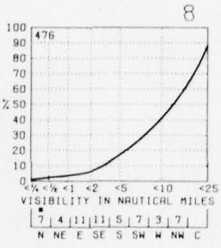


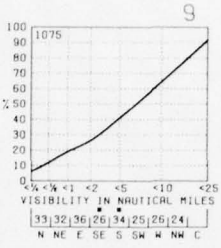
INSUFFICIENT DATA

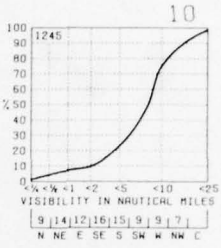


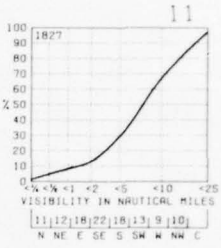


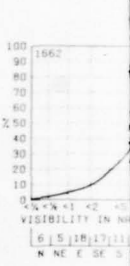


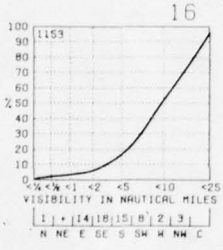


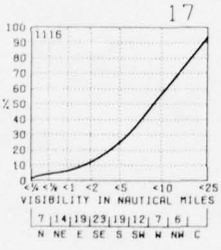


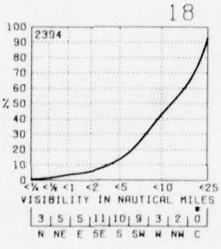


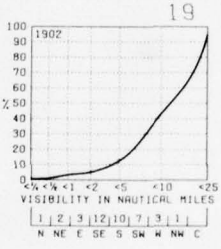


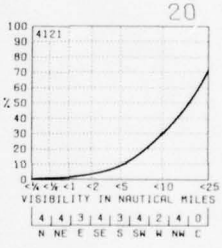


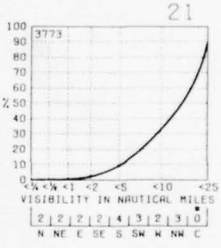


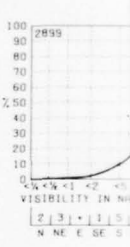


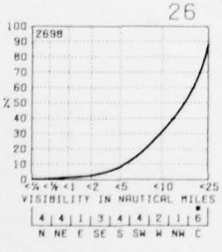


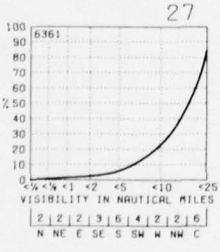


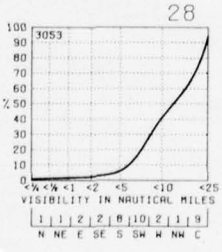


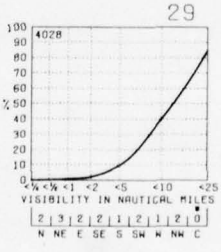


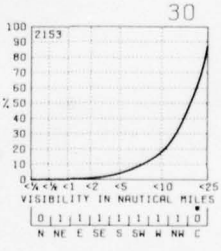


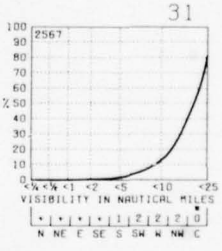


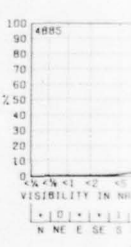


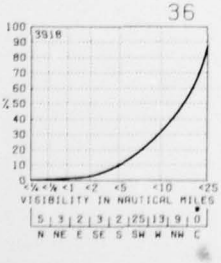


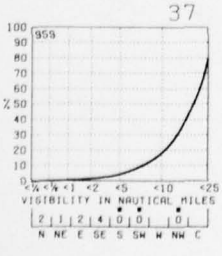


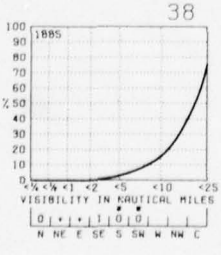


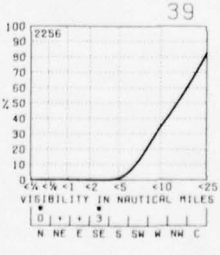


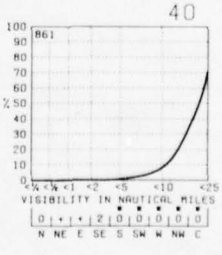


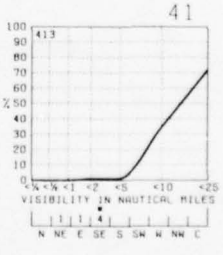


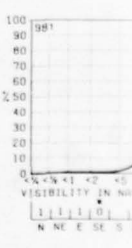








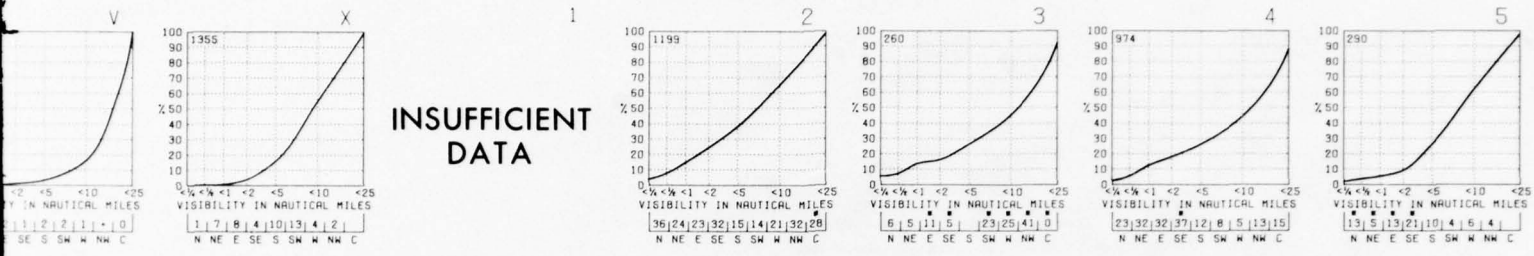


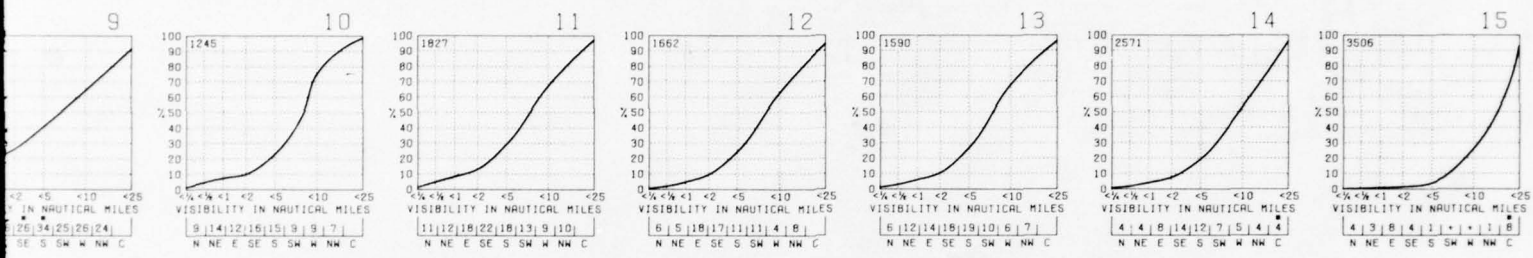


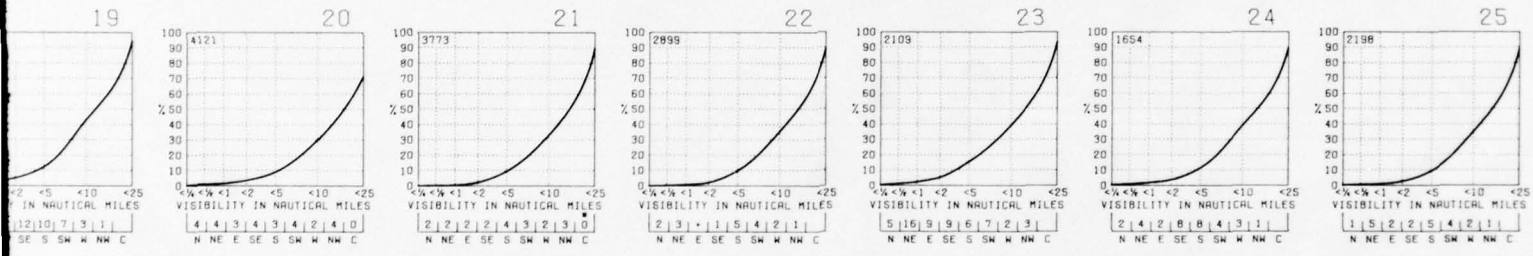
Graphs represent the objective compilation of available data for specified areas without regard t
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

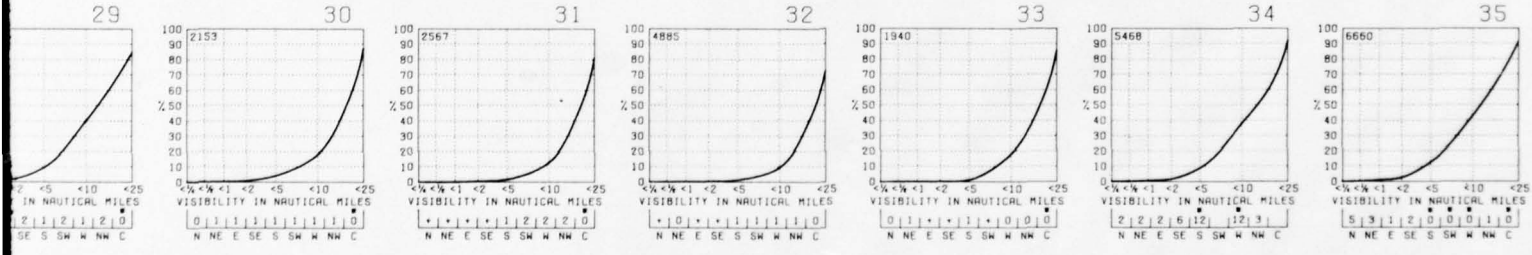
DECEMBER

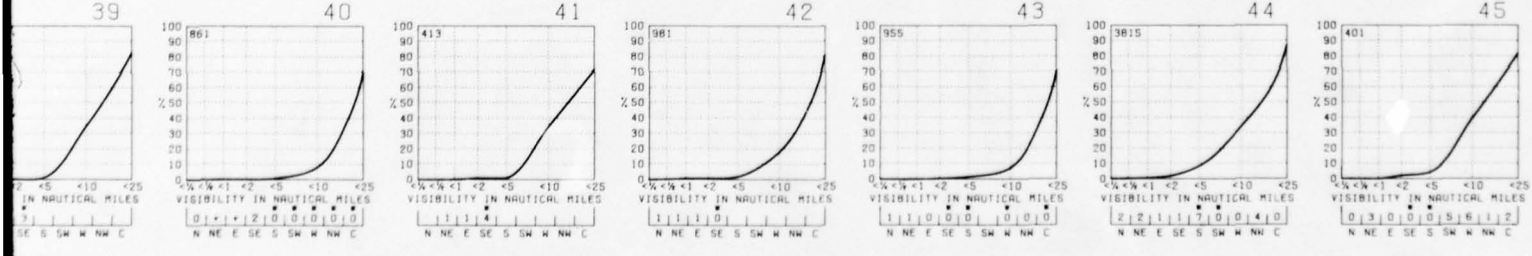
INSUFFICIENT DATA





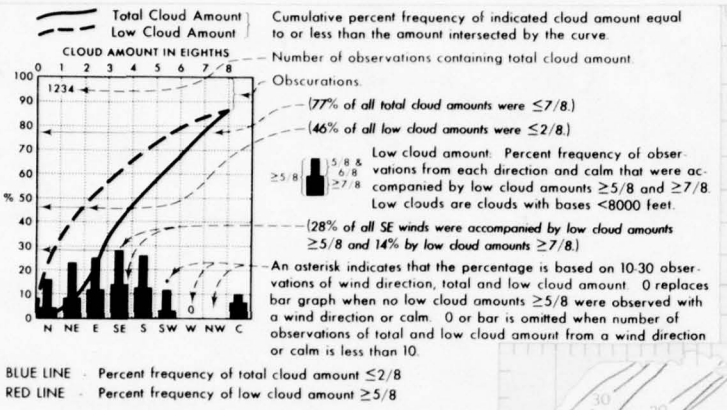






he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER



Cumulative percent frequency of indicated cloud amount equal to or less than the amount intersected by the curve.

Number of observations containing total cloud amount.

Obscurations.

(77% of all total cloud amounts were ≤7/8.)

(46% of all low cloud amounts were ≤2/8.)

Low cloud amount. Percent frequency of observations from each direction and calm that were accompanied by low cloud amounts ≥5/8 and ≥7/8. Low clouds are clouds with bases <8000 feet.

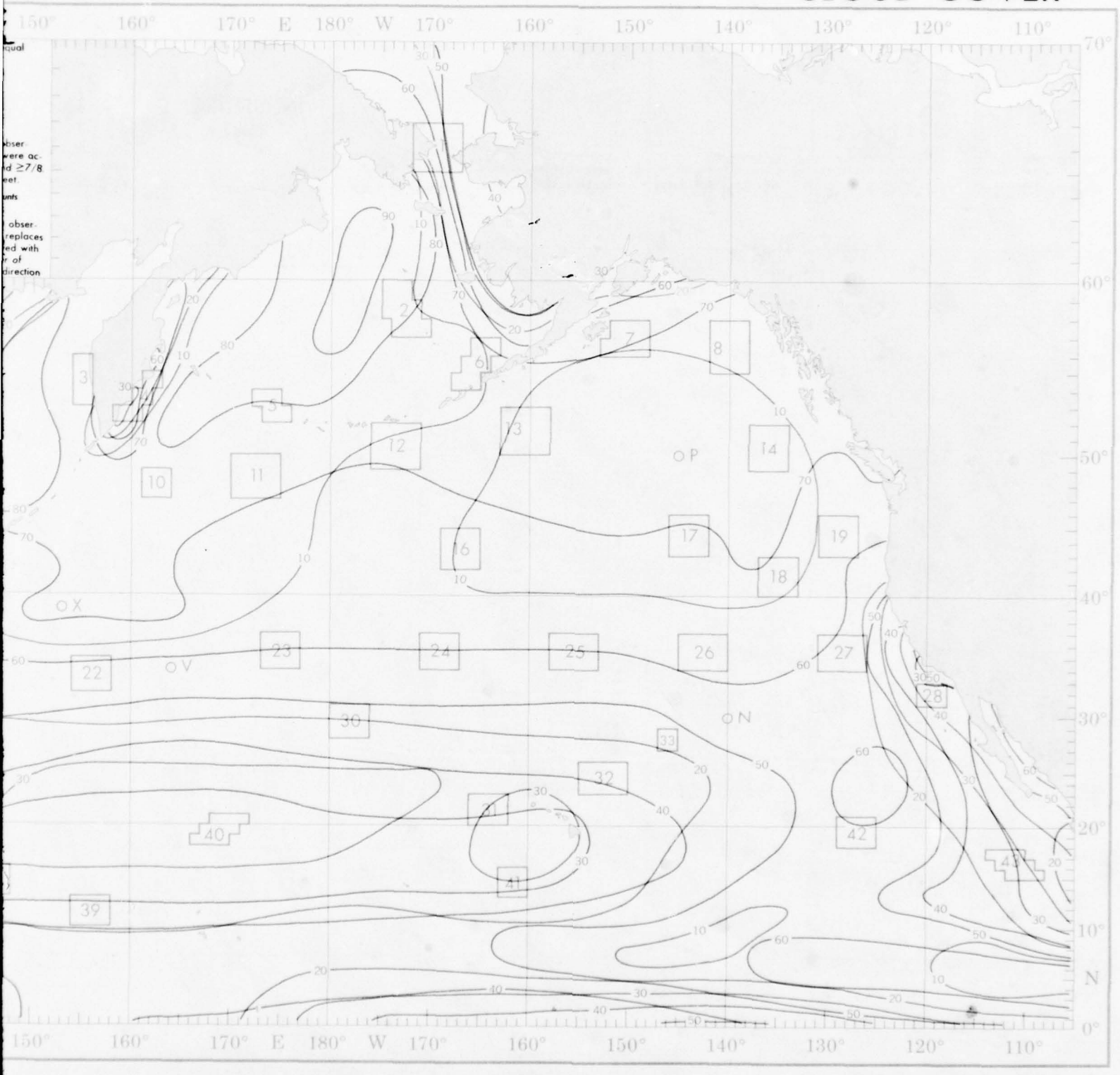
(28% of all SE winds were accompanied by low cloud amounts ≥5/8 and 14% by low cloud amounts ≥7/8.)

An asterisk indicates that the percentage is based on 10-30 observations of wind direction, total and low cloud amount. 0 replaces bar graph when no low cloud amounts ≥5/8 were observed with a wind direction or calm. 0 or bar is omitted when number of observations of total and low cloud amount from a wind direction or calm is less than 10.

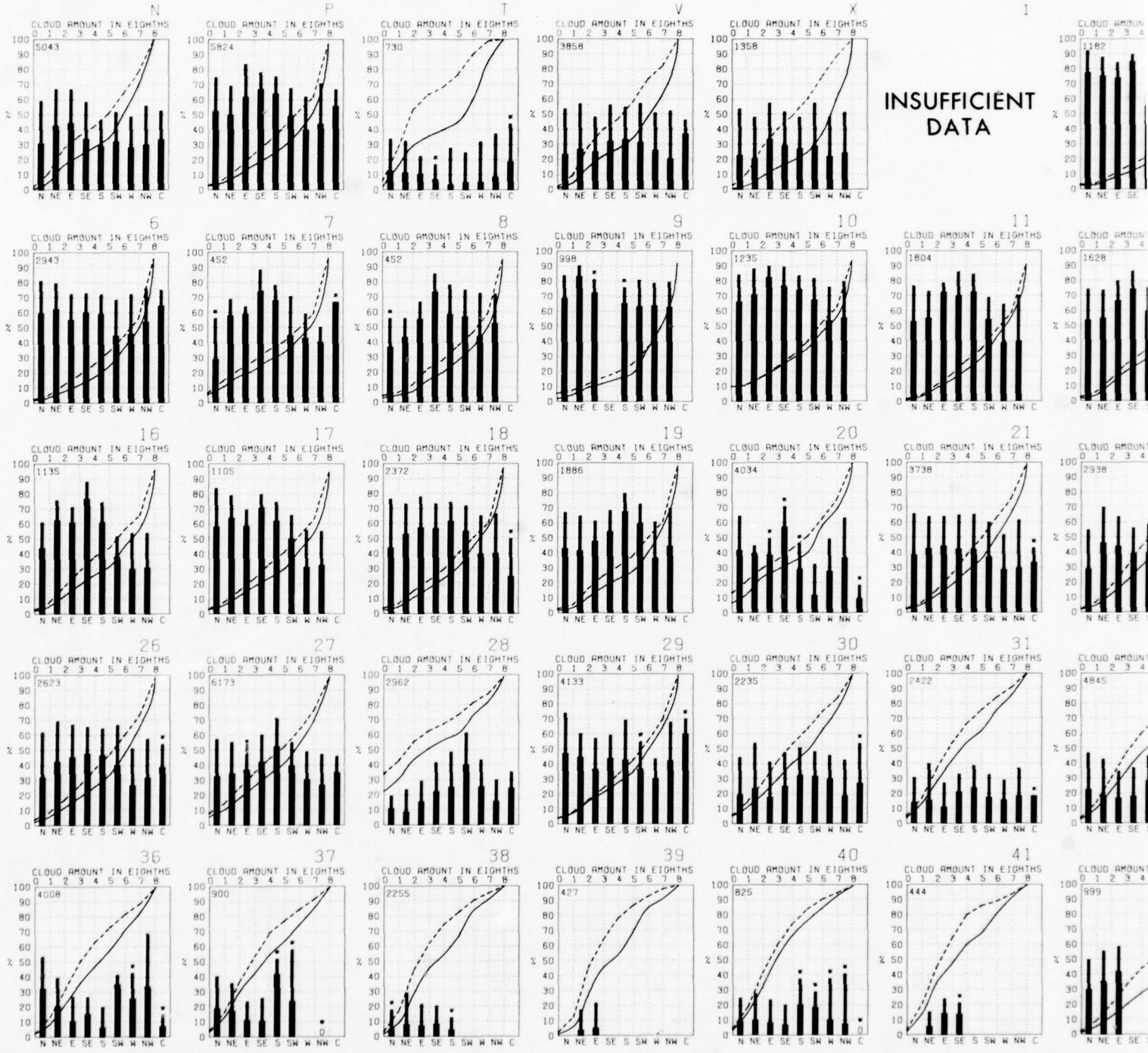
BLUE LINE - Percent frequency of total cloud amount ≤2/8

RED LINE - Percent frequency of low cloud amount ≥5/8

CLOUD COVER

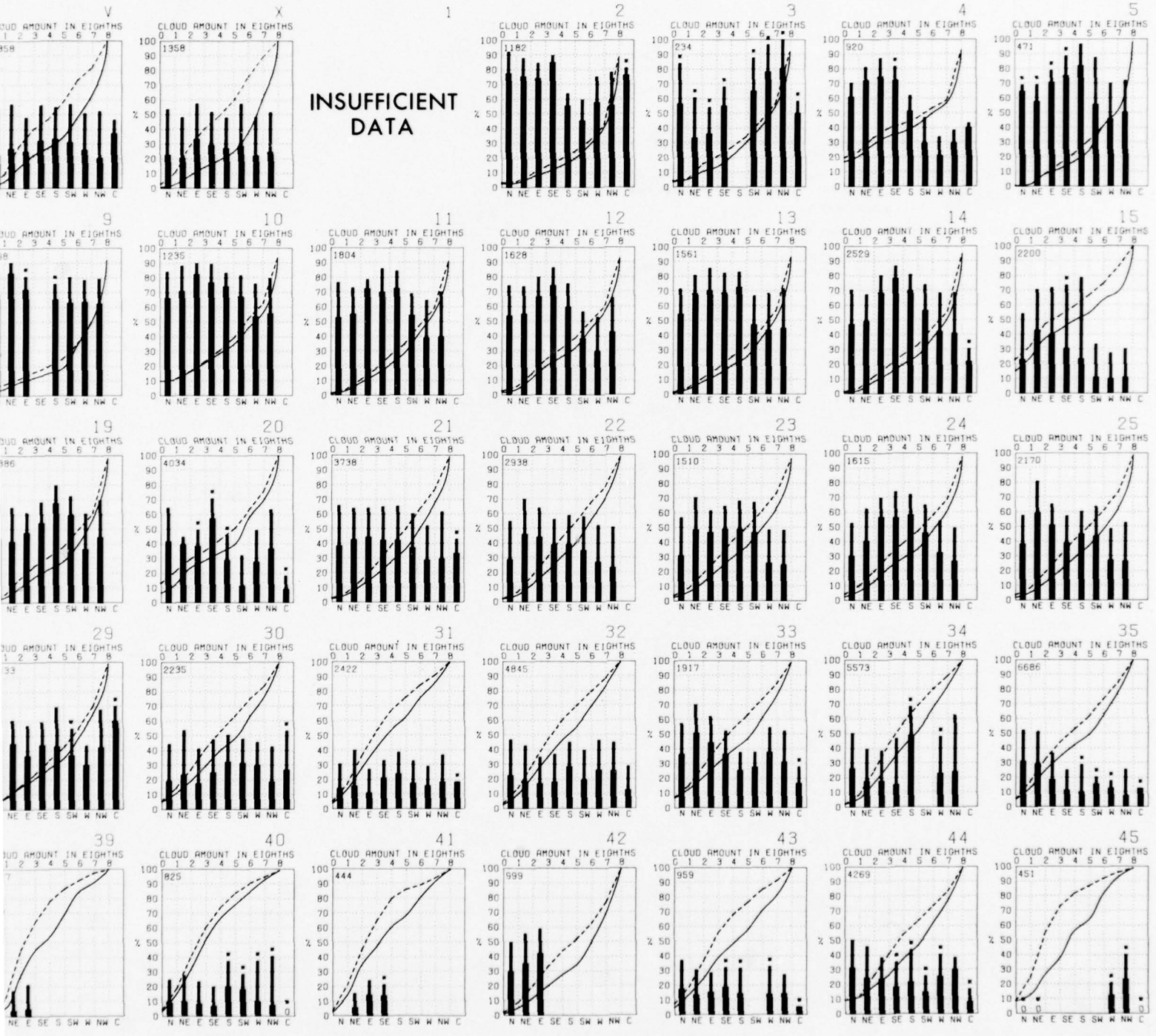

150° 160° 170° E 180° W 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N
OP
OX
OV
ON
1 2 3 4 5 6 7 8 10 11 12 13 14 16 17 18 19 22 23 24 25 26 27 28 30 32 33 39 40 41 42 43

CLOUD COVER



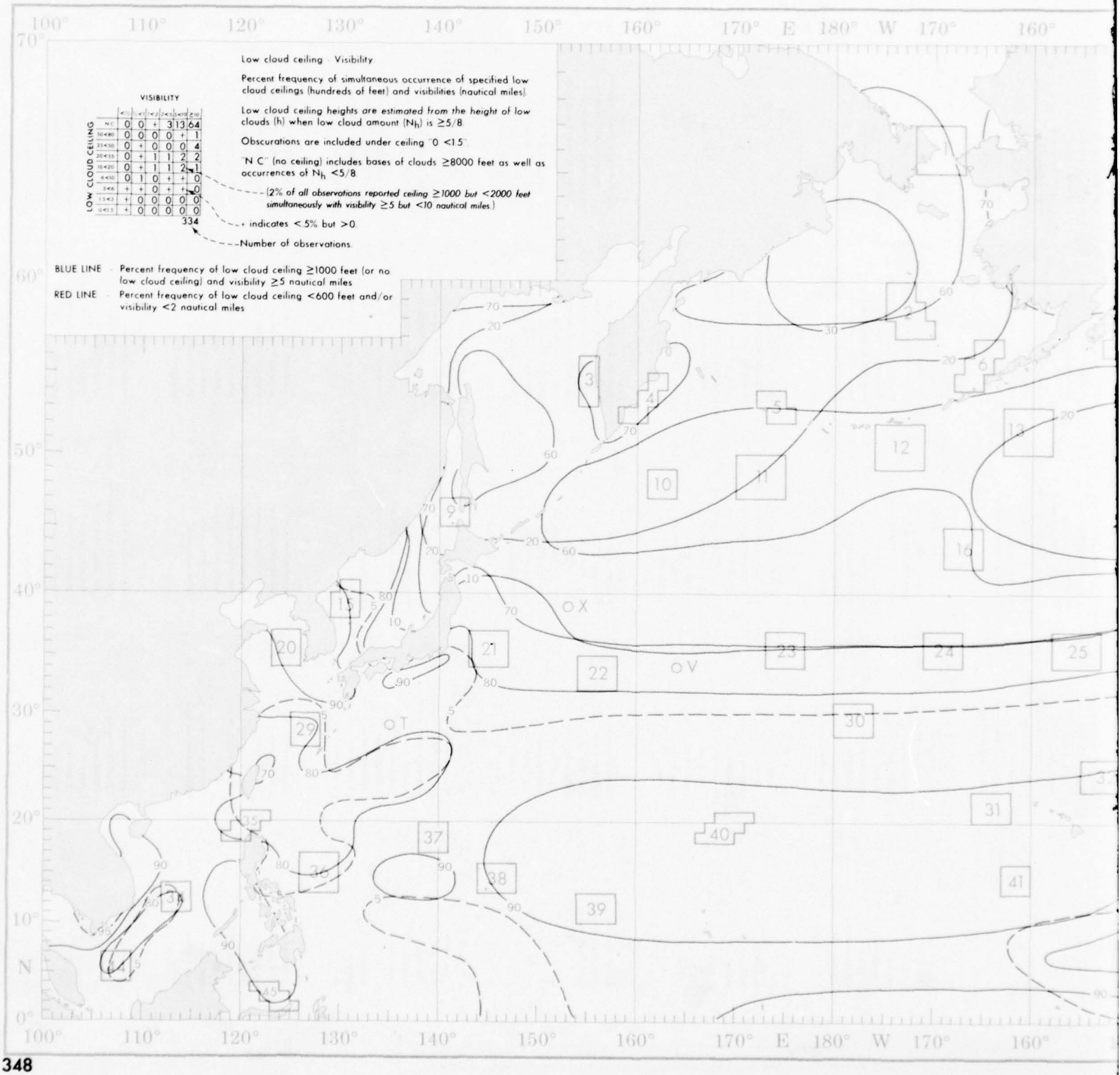
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DECEMBER

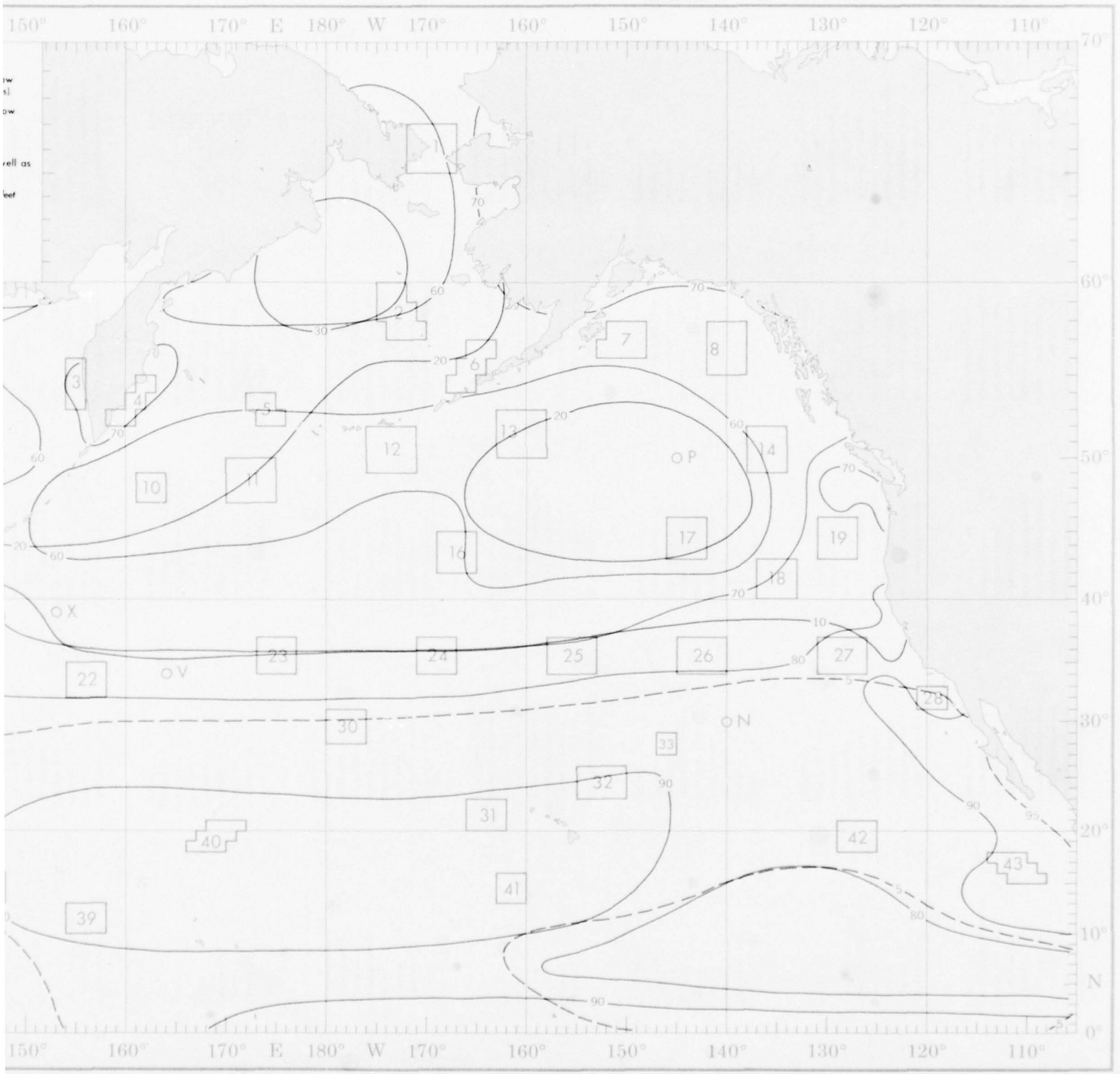


ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER


Low cloud ceiling - Visibility
Percent frequency of simultaneous occurrence of specified low cloud ceilings (hundreds of feet) and visibilities (nautical miles).
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (N_h) is ≥5/8.
Obscurations are included under ceiling "0 <1.5".
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of N_h <5/8.
VISIBILITY
LOW CLOUD CEILING
(2% of all observations reported ceiling ≥1000 but <2000 feet simultaneously with visibility ≥5 but <10 nautical miles.)
+ indicates <.5% but >0.
334
Number of observations.
BLUE LINE - Percent frequency of low cloud ceiling ≥1000 feet (or no low cloud ceiling) and visibility ≥5 nautical miles
RED LINE - Percent frequency of low cloud ceiling <600 feet and/or visibility <2 nautical miles

CEILING AND VISIBILITY



CEILING AND VISIBILITY

N

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	+	4	39
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	5
20<35	0	0	+	+	6	36
10<20	+	0	+	+	4	5
6<10	0	0	+	+	+	+
3<6	0	+	0	0	+	+
1.5<3	0	0	0	0	+	0
0<1.5	0	0	0	0	0	0

5042

P

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	20	9
50<80	0	0	0	0	+	+
35<50	0	0	0	+	1	+
20<35	+	+	+	1	13	6
10<20	+	+	1	4	18	6
6<10	+	1	1	3	3	1
3<6	+	1	1	2	1	+
1.5<3	+	+	+	+	+	0
0<1.5	2	+	+	0	0	0

5576

T

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	61
50<80	0	0	0	0	0	1
35<50	0	0	0	+	1	8
20<35	0	0	0	1	6	12
10<20	0	0	0	1	1	1
6<10	0	0	0	+	0	0
3<6	0	0	0	0	0	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

730

V

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	+	3	44
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	2
20<35	0	+	+	+	4	29
10<20	+	+	+	1	5	7
6<10	+	+	+	+	+	+
3<6	+	0	0	+	+	0
1.5<3	0	0	0	0	0	0
0<1.5	+	0	0	0	0	0

3857

X

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	1	4	18	27
50<80	0	0	0	0	+	1
35<50	0	0	0	+	1	2
20<35	0	0	+	2	9	10
10<20	+	0	1	5	10	5
6<10	+	+	+	1	1	+
3<6	0	+	+	+	+	+
1.5<3	0	0	0	+	0	0
0<1.5	0	0	0	0	0	0

1341

1

INSUFFICIENT DATA

6

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	7	19
50<80	0	0	+	+	1	2
35<50	+	+	+	+	2	4
20<35	+	+	1	2	4	14
10<20	+	1	1	5	9	12
6<10	+	+	1	2	2	2
3<6	+	+	+	1	+	+
1.5<3	0	0	+	0	+	+
0<1.5	1	+	1	1	1	0

2493

7

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	3	32
50<80	0	0	0	1	+	1
35<50	0	0	+	0	1	1
20<35	0	0	+	3	6	6
10<20	0	1	3	3	4	11
6<10	+	0	+	3	3	8
3<6	0	0	0	1	1	1
1.5<3	+	0	0	0	+	0
0<1.5	1	2	1	1	+	0

375

8

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	2	26
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	1	2	5
10<20	+	+	0	2	8	18
6<10	1	0	0	3	5	10
3<6	0	+	+	1	3	1
1.5<3	+	0	0	+	1	1
0<1.5	1	1	2	1	1	1

365

9

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	2	5	14
50<80	+	0	+	+	+	1
35<50	0	0	+	1	3	2
20<35	1	1	1	4	7	11
10<20	4	3	3	6	7	5
6<10	+	1	1	1	1	+
3<6	1	1	+	1	1	0
1.5<3	+	0	+	0	+	+
0<1.5	4	2	2	2	1	+

582

10

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	12	14
50<80	0	0	0	+	+	+
35<50	0	0	0	+	1	+
20<35	+	+	0	2	16	4
10<20	1	1	1	5	18	6
6<10	+	1	1	3	4	1
3<6	1	+	+	1	1	+
1.5<3	0	0	0	+	+	+
0<1.5	3	1	1	+	+	+

1113

11

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	2	10	16
50<80	0	+	0	0	+	+
35<50	0	0	+	+	1	1
20<35	+	0	+	1	3	3
10<20	+	+	1	5	10	9
6<10	+	+	1	6	6	5
3<6	+	1	+	2	2	1
1.5<3	+	+	1	1	+	+
0<1.5	4	2	2	2	1	+

1366

16

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	9	29
50<80	+	0	0	+	+	0
35<50	0	0	0	0	1	2
20<35	0	0	+	1	7	6
10<20	+	+	1	3	7	9
6<10	+	+	1	2	8	3
3<6	+	+	+	1	1	1
1.5<3	+	+	0	+	+	+
0<1.5	2	+	1	1	1	+

933

17

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	0	+	2	8	24
50<80	0	0	0	0	0	+
35<50	0	0	0	0	+	1
20<35	+	+	+	1	2	5
10<20	+	+	1	2	9	11
6<10	+	+	1	4	6	6
3<6	+	+	+	1	2	+
1.5<3	+	0	0	+	+	0
0<1.5	4	1	1	1	1	+

701

18

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	6	23
50<80	0	0	0	0	+	1
35<50	0	0	0	0	+	1
20<35	0	+	0	1	2	5
10<20	+	+	+	3	8	16
6<10	+	0	+	1	4	5
3<6	+	+	+	1	1	1
1.5<3	0	0	+	+	+	+
0<1.5	1	1	1	1	1	+

1720

19

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	4	27
50<80	0	0	0	+	1	1
35<50	0	0	+	+	1	1
20<35	0	0	+	1	4	14
10<20	0	0	+	4	9	16
6<10	+	0	1	1	4	5
3<6	+	+	+	1	1	1
1.5<3	0	0	0	+	+	+
0<1.5	1	+	+	1	+	+

1533

20

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	9	35
50<80	0	+	0	1	1	2
35<50	0	0	0	1	4	5
20<35	0	0	0	1	6	15
10<20	0	+	+	+	3	8
6<10	0	0	+	+	2	3
3<6	0	0	0	0	0	1
1.5<3	0	0	0	0	+	+
0<1.5	1	0	+	+	+	+

517

21

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	32
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	2
20<35	0	+	+	+	3	10
10<20	0	0	+	2	7	17
6<10	0	+	+	2	5	7
3<6	+	+	+	1	1	2
1.5<3	+	0	+	+	+	+
0<1.5	0	+	+	1	+	+

2998

26

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	1	5	33
50<80	0	0	0	0	+	1
35<50	0	0	0	+	+	2
20<35	0	0	0	+	2	8
10<20	+	+	+	2	6	18
6<10	0	+	+	2	4	9
3<6	+	+	+	1	2	2
1.5<3	0	0	0	+	+	+
0<1.5	+	+	+	+	1	+

1856

27

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	1	3	41
50<80	0	0	0	+	+	1
35<50	0	0	0	+	+	2
20<35	+	0	0	+	2	12
10<20	0	+	+	+	3	17
6<10	+	+	+	1	3	8
3<6	+	0	+	+	1	1
1.5<3	0	+	0	+	+	+
0<1.5	1	+	+	+	+	+

4691

28

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	+	+	+	2	23	44
50<80	0	0	0	+	1	+
35<50	0	0	0	+	1	1
20<35	0	+	+	+	3	4
10<20	0	+	+	1	5	7
6<10	+	+	+	+	3	2
3<6	+	+	+	+	1	+
1.5<3	0	0	0	+	+	+
0<1.5	1	+	+	+	+	+

2637

29

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	26
50<80	0	0	0	0	+	1
35<50	0	0	+	+	1	2
20<35	0	+	+	1	6	10
10<20	+	+	+	4	10	14
6<10	+	+	+	2	6	4
3<6	0	+	+	+	1	1
1.5<3	+	0	0	+	+	+
0<1.5	+	+	+	1	+	+

2349

30

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	3	51
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	2
20<35	0	+	+	+	2	10
10<20	+	0	+	1	3	13
6<10	+	0	+	1	3	7
3<6	0	0	+	+	1	1
1.5<3	0	0	0	0	+	+
0<1.5	+	+	+	+	+	+

1598

31

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	+	+	4	63
50<80	0	0	+	0	+	1
35<50	0	0	+	0	+	1
20<35	0	0	+	+	2	7
10<20	0	0	0	+	2	10
6<10	0	0	+	+	1	5
3<6	0	0	+	+	+	1
1.5<3	0	0	0	+	+	+
0<1.5	+	+	+	+	+	+

1958

36

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	+	+	2	10	52
50<80	0	0	0	+	+	+
35<50	0	0	0	+	+	1
20<35	+	+	+	2	3	3
10<20	+	+	+	2	5	7
6<10	+	+	+	2	5	3
3<6	0	0	+	1	+	1
1.5<3	0	+	+	+	+	+
0<1.5	+	+	+	+	+	+

3254

37

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	6	62
50<80	0	0	0	0	0	0
35<50	0	0	0	0	+	+
20<35	0	0	+	0	+	4
10<20	0	0	+	1	3	9
6<10	+	+	0	+	3	5
3<6	0	+	+	1	1	1
1.5<3	0	0	0	0	0	+
0<1.5	0	0	+	+	+	+

676

38

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	1	7	68
50<80	0	0	0	0	+	+
35<50	0	0	0	+	+	1
20<35	0	0	0	+	1	3
10<20	0	0	+	1	1	8
6<10	0	0	+	1	2	3
3<6	0	0	+	+	+	1
1.5<3	0	0	0	0	+	+
0<1.5	0	+	0	+	0	+

1220

39

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	8	72
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	+
20<35	0	0	0	0	+	3
10<20	0	0	0	0	2	7
6<10	0	0	0	0	1	2
3<6	0	0	0	0	1	2
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

204

40

LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	0	2	72
50<80	0	0	0	0	+	+
35<50	0	0	0	0	+	1
20<35	0	0	0	0	1	5
10<20	0	0	0	0	+	10
6<10	0	0	0	+	1	4
3<6	0	0	0	0	+	1
1.5<3	0	0	0	0	0	0
0<1.5	0	+	0	+	0	0

690

41

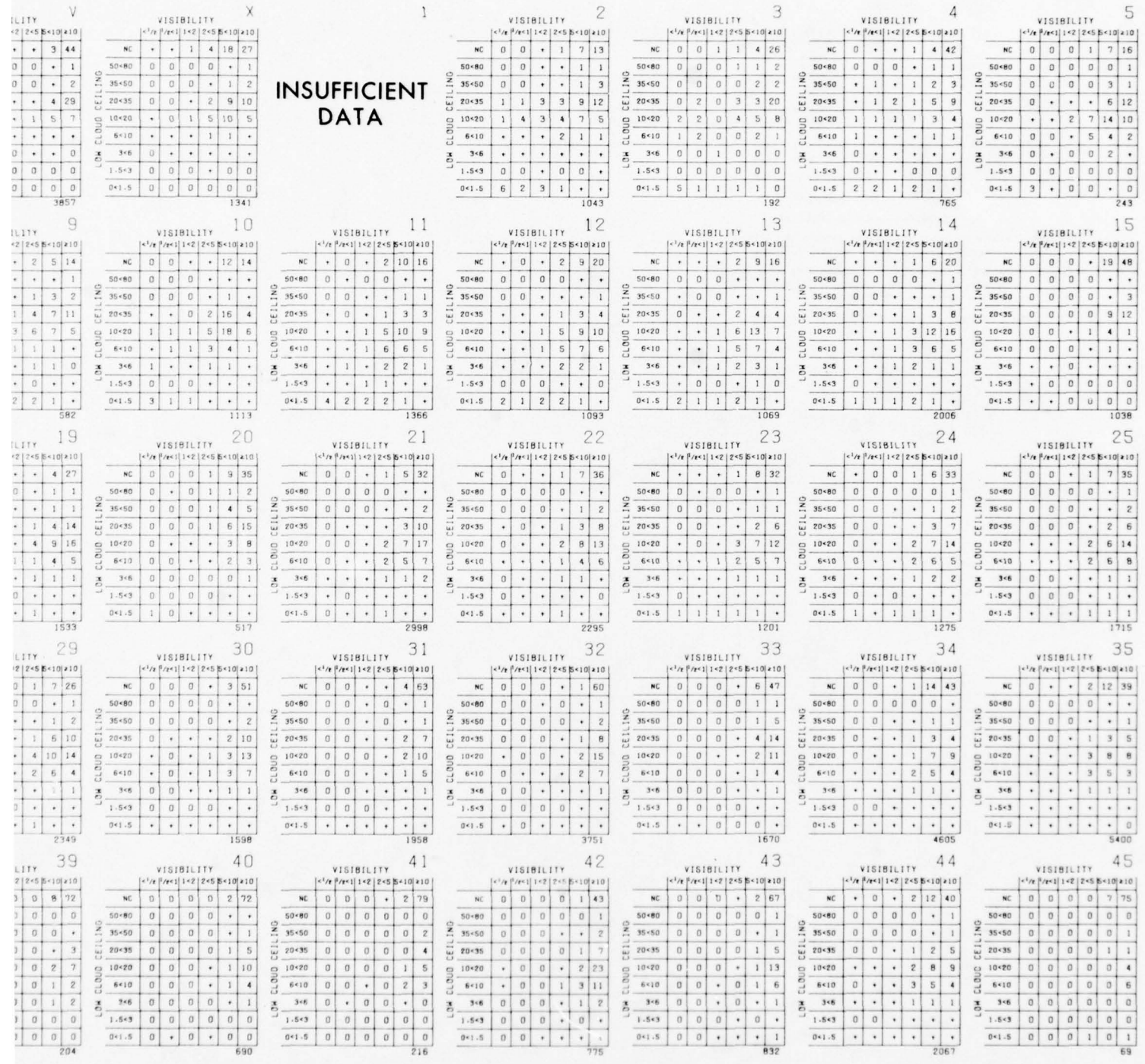
LOW CLOUD CEILING \ VISIBILITY	<1/2	1/2<1	1<2	2<5	5<10	≥10
NC	0	0	0	+	2	79
50<80	0	0	0	0	0	0
35<50	0	0	0	0	0	2
20<35	0	0	0	0	0	4
10<20	0	0	0	0	1	5
6<10	0	0	+	0	2	3
3<6	0	+	0	0	+	0
1.5<3	0	0	0	0	0	0
0<1.5	0	0	0	0	0	0

216

Graphs represent the objective compilation of available data for specified areas without
The isopleth analyses (opposite page) are based on all available data subjectively adjus

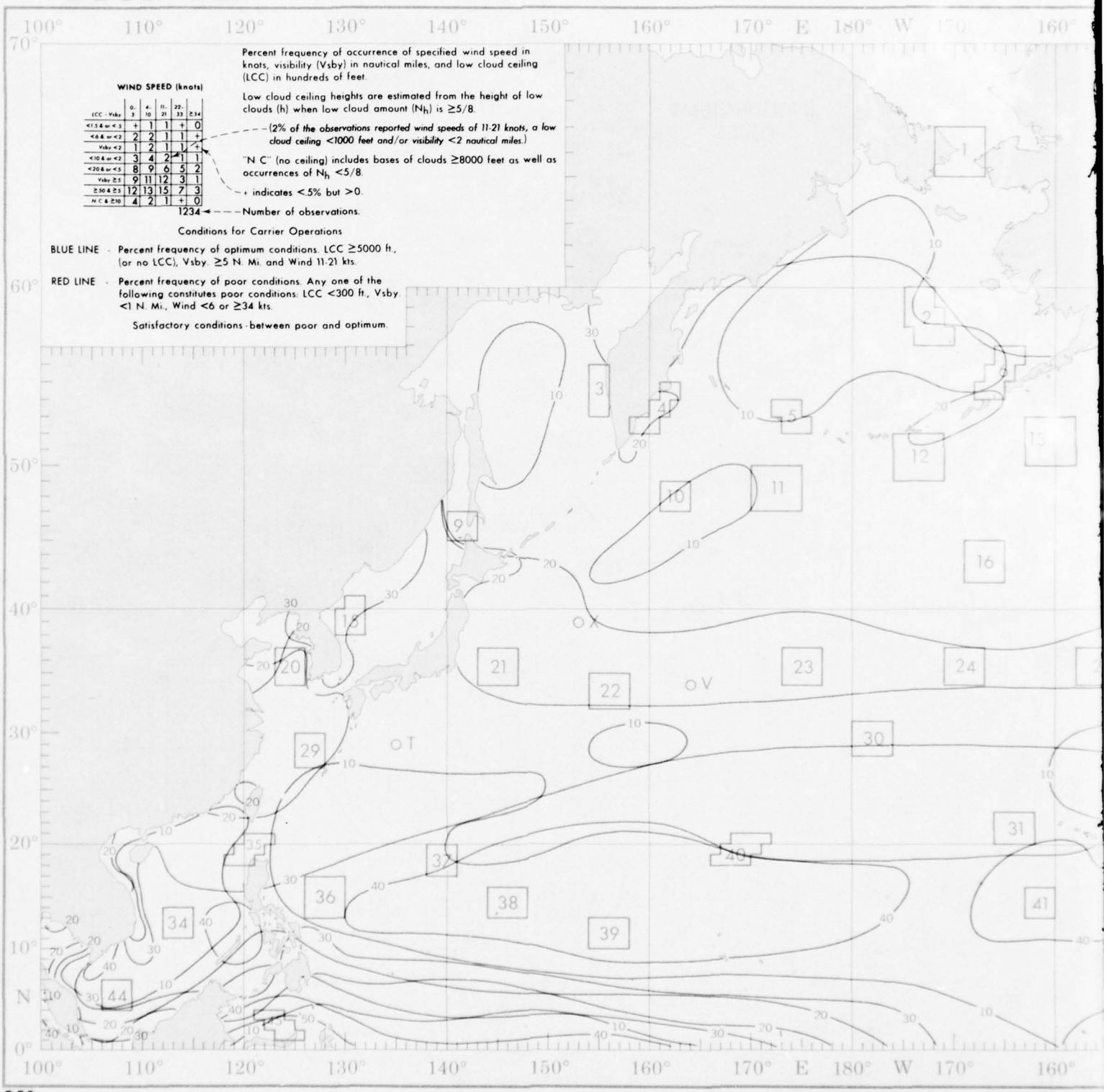
DECEMBER

INSUFFICIENT DATA

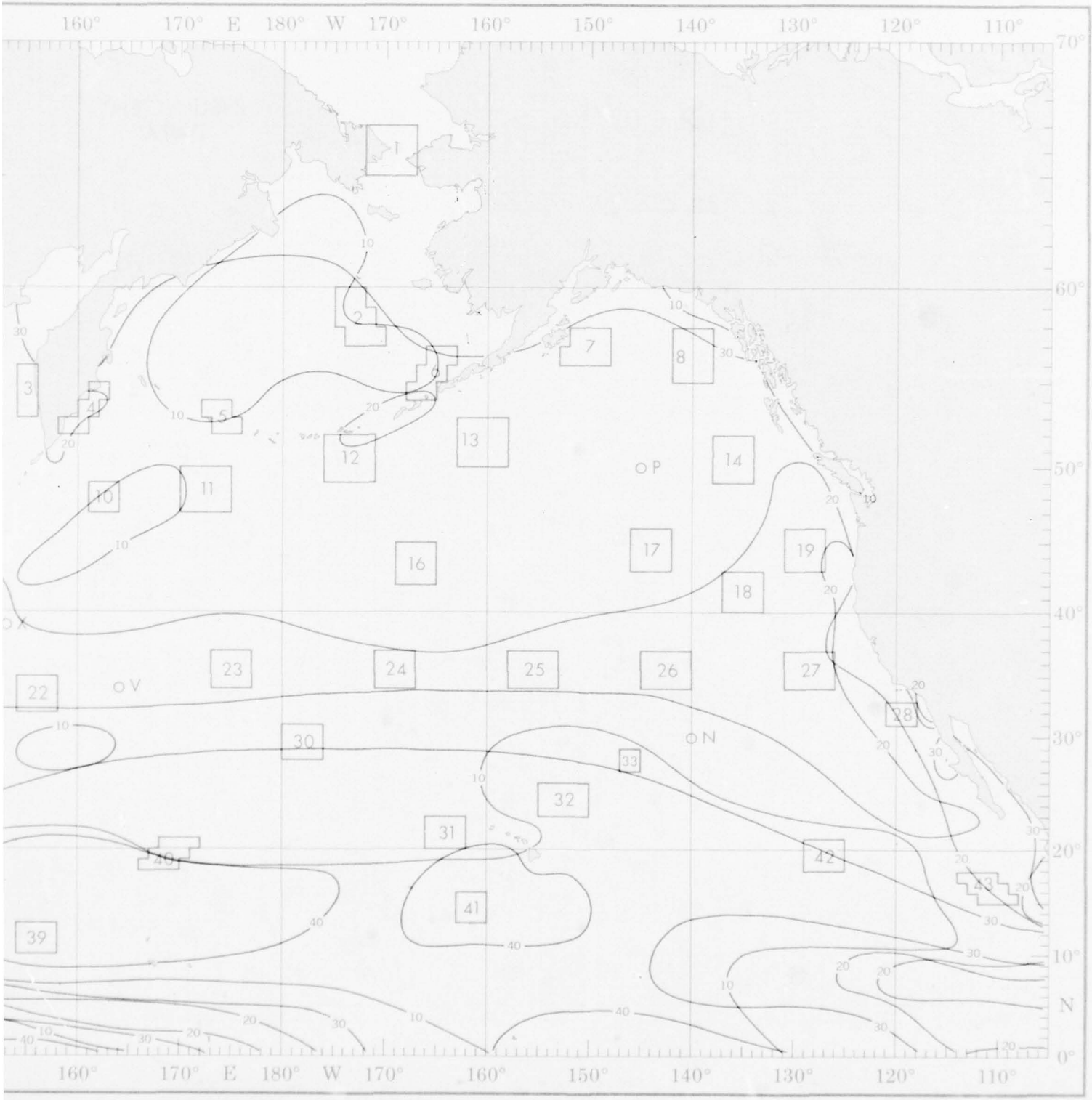


objective compilation of available data for specified areas without regard to suspected biases.
opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER


WIND SPEED (knots)
LCC - Vsby
0-3
4-10
11-21
22-33
≥34
<1.5 & or <.5
<6 & or <2
Vsby <2
<10 & or <2
<20 & or <5
Vsby ≥5
≥50 & ≥5
N C & ≥10
1234
Percent frequency of occurrence of specified wind speed in knots, visibility (Vsby) in nautical miles, and low cloud ceiling (LCC) in hundreds of feet.
Low cloud ceiling heights are estimated from the height of low clouds (h) when low cloud amount (Nh) is ≥5/8.
(2% of the observations reported wind speeds of 11-21 knots, a low cloud ceiling <1000 feet and/or visibility <2 nautical miles.)
"N C" (no ceiling) includes bases of clouds ≥8000 feet as well as occurrences of Nh <5/8.
+ indicates <.5% but >0.
Number of observations.
Conditions for Carrier Operations
BLUE LINE - Percent frequency of optimum conditions. LCC ≥5000 ft., (or no LCC), Vsby. ≥5 N. Mi. and Wind 11-21 kts.
RED LINE - Percent frequency of poor conditions. Any one of the following constitutes poor conditions: LCC <300 ft., Vsby. <1 N. Mi., Wind <6 or ≥34 kts.
Satisfactory conditions - between poor and optimum.
100° 110° 120° 130° 140° 150° 160° 170° E 180° W 170° 160°
70° 60° 50° 40° 30° 20° 10° N 0°

WIND-VISIBILITY-CLOUDINESS



LOW CLOUD CEILING-VISIBILITY-WIND

N

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	0	0	+
<6 & OR <2	+	+	+	+	+
VSBY <2	+	+	+	+	+
<10 & OR <2	+	+	+	+	+
<20 & OR <5	+	2	5	3	1
VSBY ≥5	4	29	51	13	1
≥50 & ≥5	2	14	21	5	+
NC & ≥10	2	13	19	4	+

5038

P

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	1	+
<6 & OR <2	+	1	4	4	3
VSBY <2	+	1	3	3	2
<10 & OR <2	+	2	6	7	5
<20 & OR <5	1	4	13	20	12
VSBY ≥5	1	8	25	31	15
≥50 & ≥5	1	3	11	10	5
NC & ≥10	+	1	3	3	1

5564

T

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	+	0	0
<20 & OR <5	+	+	1	2	1
VSBY ≥5	5	20	48	22	2
≥50 & ≥5	4	16	36	12	1
NC & ≥10	4	15	33	9	0

730

V

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	0	+	+	1	1
VSBY <2	0	+	+	1	1
<10 & OR <2	0	+	+	1	1
<20 & OR <5	+	2	5	7	3
VSBY ≥5	3	18	38	31	7
≥50 & ≥5	2	11	20	13	2
NC & ≥10	2	11	18	12	2

3838

X

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	+	+	1	2	2
VSBY <2	+	+	1	1	2
<10 & OR <2	+	1	1	2	2
<20 & OR <5	+	2	8	13	9
VSBY ≥5	1	9	28	36	10
≥50 & ≥5	1	6	16	17	5
NC & ≥10	1	5	10	9	2

1341

1

INSUFFICIENT DATA

WIND SPEED (KNOTS)

LCC – VSBY
<1.5 & OR <.5
<6 & OR <2
VSBY <2
<10 & OR <2
<20 & OR <5
VSBY ≥5
≥50 & ≥5
NC & ≥10

6

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	1	3	5	3
VSBY <2	+	1	3	4	3
<10 & OR <2	1	2	6	6	4
<20 & OR <5	2	7	18	16	6
VSBY ≥5	4	17	35	18	2
≥50 & ≥5	1	7	14	5	+
NC & ≥10	1	5	9	3	+

2468

7

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	1	+	1	3
<6 & OR <2	1	1	4	2	5
VSBY <2	1	1	2	1	4
<10 & OR <2	2	3	9	5	9
<20 & OR <5	3	6	21	10	11
VSBY ≥5	4	15	36	16	9
≥50 & ≥5	2	8	14	7	5
NC & ≥10	2	7	13	6	4

369

8

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	2	3	2	1
<6 & OR <2	1	3	5	4	2
VSBY <2	+	2	2	1	1
<10 & OR <2	1	6	12	7	7
<20 & OR <5	1	10	26	15	10
VSBY ≥5	2	13	40	17	12
≥50 & ≥5	1	6	14	5	3
NC & ≥10	1	6	12	5	3

363

9

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	3	8	6	2
<6 & OR <2	1	5	13	11	3
VSBY <2	+	4	11	10	3
<10 & OR <2	1	5	13	12	4
<20 & OR <5	2	8	23	19	5
VSBY ≥5	1	10	26	18	2
≥50 & ≥5	1	4	10	5	0
NC & ≥10	+	3	7	4	0

392

10

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	2	2	3
<6 & OR <2	0	1	3	4	5
VSBY <2	0	1	2	3	5
<10 & OR <2	0	2	6	7	7
<20 & OR <5	0	5	18	17	14
VSBY ≥5	+	10	34	24	9
≥50 & ≥5	+	4	12	8	2
NC & ≥10	+	3	7	4	+

1110

11

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	3	3	3	3
<6 & OR <2	+	3	6	7	6
VSBY <2	+	3	3	4	4
<10 & OR <2	+	6	12	12	9
<20 & OR <5	1	10	23	22	13
VSBY ≥5	1	14	26	19	6
≥50 & ≥5	+	8	9	7	2
NC & ≥10	+	5	6	4	1

1355

16

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	2	2	2	+
<6 & OR <2	+	2	4	4	2
VSBY <2	+	1	2	2	1
<10 & OR <2	1	3	9	9	4
<20 & OR <5	1	5	16	16	8
VSBY ≥5	1	12	33	27	11
≥50 & ≥5	+	7	16	12	4
NC & ≥10	+	6	13	8	3

930

17

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	2	5	3	1
<6 & OR <2	0	3	8	6	2
VSBY <2	0	2	5	3	1
<10 & OR <2	+	4	14	11	5
<20 & OR <5	+	8	25	19	8
VSBY ≥5	+	14	35	21	6
≥50 & ≥5	+	7	14	9	2
NC & ≥10	+	6	11	6	1

699

18

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	1	1	+
<6 & OR <2	0	2	3	2	1
VSBY <2	0	2	1	1	+
<10 & OR <2	+	4	8	7	2
<20 & OR <5	1	8	21	14	4
VSBY ≥5	3	18	43	21	5
≥50 & ≥5	1	7	13	7	2
NC & ≥10	1	6	10	5	1

1715

19

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	1	+
<6 & OR <2	+	1	3	2	1
VSBY <2	+	1	2	1	+
<10 & OR <2	+	3	7	6	2
<20 & OR <5	1	7	21	14	5
VSBY ≥5	1	17	41	24	6
≥50 & ≥5	1	8	16	8	2
NC & ≥10	1	7	13	6	1

1527

20

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	1	+	+	0
<6 & OR <2	0	1	1	2	0
VSBY <2	0	1	+	1	0
<10 & OR <2	+	4	2	2	+
<20 & OR <5	+	8	9	5	1
VSBY ≥5	8	32	34	19	2
≥50 & ≥5	7	18	16	6	+
NC & ≥10	6	13	12	3	+

513

21

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	+	1	+
<6 & OR <2	+	1	2	3	1
VSBY <2	0	+	1	1	+
<10 & OR <2	+	3	8	7	3
<20 & OR <5	+	7	19	15	6
VSBY ≥5	1	18	39	25	8
≥50 & ≥5	1	10	16	8	2
NC & ≥10	1	9	14	7	2

2979

26

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	+	1	3	2	1
VSBY <2	+	+	1	1	+
<10 & OR <2	+	5	9	6	2
<20 & OR <5	1	12	21	12	4
VSBY ≥5	2	24	43	20	4
≥50 & ≥5	1	9	19	8	1
NC & ≥10	1	8	17	6	1

1846

27

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	1	1	+	+
<6 & OR <2	+	2	2	1	+
VSBY <2	+	1	1	+	+
<10 & OR <2	1	5	8	3	1
<20 & OR <5	2	11	18	6	1
VSBY ≥5	5	30	44	14	2
≥50 & ≥5	3	15	20	6	1
NC & ≥10	3	14	18	5	1

4667

28

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	1	1	+	+	0
<6 & OR <2	1	2	1	+	0
VSBY <2	1	1	+	+	0
<10 & OR <2	1	4	3	1	0
<20 & OR <5	3	10	9	2	+
VSBY ≥5	8	41	37	8	1
≥50 & ≥5	6	30	26	6	1
NC & ≥10	3	19	17	4	+

2612

29

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	+	1	1	0
<6 & OR <2	+	1	2	3	+
VSBY <2	0	+	1	1	+
<10 & OR <2	+	3	7	6	1
<20 & OR <5	+	8	22	15	2
VSBY ≥5	2	25	44	18	2
≥50 & ≥5	1	15	15	3	+
NC & ≥10	1	12	12	2	+

2337

30

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	0	1	2	1	+
VSBY <2	0	+	1	+	+
<10 & OR <2	0	3	7	3	1
<20 & OR <5	+	6	16	8	3
VSBY ≥5	2	23	47	19	5
≥50 & ≥5	2	15	26	9	2
NC & ≥10	2	14	24	8	2

1590

31

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	5	3	1
<20 & OR <5	+	4	11	6	1
VSBY ≥5	3	28	49	16	1
≥50 & ≥5	3	23	34	9	1
NC & ≥10	2	21	31	7	1

1938

36

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	0	1	2	2	+
VSBY <2	0	+	1	1	+
<10 & OR <2	0	1	7	6	+
<20 & OR <5	+	3	16	12	1
VSBY ≥5	2	23	50	15	1
≥50 & ≥5	1	19	35	6	+
NC & ≥10	1	17	29	5	+

3246

37

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	0	1	+	0
<6 & OR <2	+	+	3	2	0
VSBY <2	0	+	+	1	0
<10 & OR <2	+	2	7	4	0
<20 & OR <5	+	5	13	8	+
VSBY ≥5	2	28	52	14	+
≥50 & ≥5	2	23	37	6	0
NC & ≥10	2	22	33	6	0

670

38

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	+	0	+	0	0
<6 & OR <2	+	+	2	+	+
VSBY <2	0	0	+	0	+
<10 & OR <2	+	1	5	1	+
<20 & OR <5	+	3	12	4	+
VSBY ≥5	+	18	63	15	+
≥50 & ≥5	+	15	50	10	+
NC & ≥10	+	14	45	9	+

1216

39

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	0	0	5	1	0
<20 & OR <5	0	1	13	1	0
VSBY ≥5	1	8	78	13	0
≥50 & ≥5	1	7	62	10	0
NC & ≥10	1	6	55	9	0

204

40

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	1	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	+	0	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	1	3	11	3	+
VSBY ≥5	6	31	48	14	1
≥50 & ≥5	5	26	34	9	1
NC & ≥10	5	25	33	9	1

690

41

WIND SPEED (KNOTS)

LCC – VSBY	0–3	4–10	11–21	22–33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	+	0	3	2	+
<20 & OR <5	1	1	6	5	+
VSBY ≥5	3	17	60	18	1
≥50 & ≥5	1	15	51	12	+
NC & ≥10	1	15	50	12	0

208

Graphs represent the objective compilation of available data for specified areas without regar
The isopleth analyses (opposite page) are based on all available data subjectively adjusted wi

V

WIND SPEED (KNOTS)

VSBY	0-3	4-10	11-21	22-33	≥34
<1.5	0	0	+	+	+
<2	0	+	+	1	1
<2	0	+	+	1	1
<2	0	+	+	1	1
<5	+	2	5	7	3
≥5	3	18	38	31	7
≥5	2	11	20	13	2
≥10	2	11	18	12	2

3838

X

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	0	+
<6 & OR <2	+	+	1	2	2
VSBY <2	+	+	1	1	2
<10 & OR <2	+	1	1	2	2
<20 & OR <5	+	2	8	13	9
VSBY ≥5	1	9	28	36	10
≥50 & ≥5	1	6	16	17	5
NC & ≥10	1	5	10	9	2

1341

1

INSUFFICIENT DATA

2

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	3	7	4	1
<6 & OR <2	1	5	14	8	1
VSBY <2	1	4	13	8	1
<10 & OR <2	1	6	15	9	1
<20 & OR <5	2	10	26	12	2
VSBY ≥5	1	14	31	13	1
≥50 & ≥5	1	5	12	4	+
NC & ≥10	1	3	7	2	0

913

3

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	2	1	2
<6 & OR <2	0	3	7	2	3
VSBY <2	0	3	7	2	3
<10 & OR <2	0	4	7	2	3
<20 & OR <5	1	12	15	7	6
VSBY ≥5	7	24	29	9	5
≥50 & ≥5	3	10	11	1	1
NC & ≥10	2	8	9	1	1

140

4

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	4	4	1
<6 & OR <2	1	3	8	6	2
VSBY <2	1	3	6	5	2
<10 & OR <2	1	4	9	6	2
<20 & OR <5	2	7	14	9	2
VSBY ≥5	5	22	33	14	3
≥50 & ≥5	4	15	21	7	2
NC & ≥10	4	14	18	6	2

636

5

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	3	1	0
<6 & OR <2	0	1	3	5	+
VSBY <2	0	1	2	4	+
<10 & OR <2	0	3	6	9	2
<20 & OR <5	1	8	22	19	3
VSBY ≥5	1	15	38	22	3
≥50 & ≥5	0	7	9	5	+
NC & ≥10	0	5	6	4	0

213

9

WIND SPEED (KNOTS)

VSBY	0-3	4-10	11-21	22-33	≥34
<.5	1	3	8	6	2
<2	1	5	13	11	3
<2	+	4	11	10	3
<2	1	5	13	12	4
<5	2	8	23	19	5
≥5	1	10	26	18	2
≥5	1	4	10	5	0
≥10	+	3	7	4	0

392

10

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	2	2	3
<6 & OR <2	0	1	3	4	5
VSBY <2	0	1	2	3	5
<10 & OR <2	0	2	6	7	7
<20 & OR <5	0	5	18	17	14
VSBY ≥5	+	10	34	24	9
≥50 & ≥5	+	4	12	8	2
NC & ≥10	+	3	7	4	+

1110

11

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	3	3	3	3
<6 & OR <2	+	3	6	7	6
VSBY <2	+	3	3	4	4
<10 & OR <2	+	6	12	12	9
<20 & OR <5	1	10	23	22	13
VSBY ≥5	1	14	26	19	6
≥50 & ≥5	+	8	9	7	2
NC & ≥10	+	5	6	4	1

1355

12

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	2
<6 & OR <2	+	3	5	6	4
VSBY <2	+	2	3	2	2
<10 & OR <2	+	6	12	11	6
<20 & OR <5	1	10	23	19	8
VSBY ≥5	2	17	31	20	5
≥50 & ≥5	1	9	12	7	1
NC & ≥10	+	6	9	4	1

998

13

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	2	4	2	1
<6 & OR <2	+	4	7	6	3
VSBY <2	+	2	3	3	2
<10 & OR <2	1	6	12	11	5
<20 & OR <5	1	11	25	21	8
VSBY ≥5	1	14	31	20	6
≥50 & ≥5	+	5	11	7	1
NC & ≥10	+	3	8	3	1

1068

14

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	2	2	1
<6 & OR <2	+	2	4	5	2
VSBY <2	+	1	2	2	2
<10 & OR <2	+	3	12	9	4
<20 & OR <5	1	7	24	20	9
VSBY ≥5	2	13	35	25	8
≥50 & ≥5	1	5	12	7	2
NC & ≥10	1	5	9	5	1

1961

15

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	+	+	1	0
VSBY <2	0	+	+	+	0
<10 & OR <2	0	+	1	1	0
<20 & OR <5	+	2	4	2	1
VSBY ≥5	1	16	48	28	5
≥50 & ≥5	+	12	32	21	2
NC & ≥10	+	7	22	17	2

1036

19

WIND SPEED (KNOTS)

VSBY	0-3	4-10	11-21	22-33	≥34
<.5	+	+	1	1	+
<2	+	1	3	2	1
<2	+	1	2	1	+
<2	+	3	7	6	2
<5	1	7	21	14	5
≥5	1	17	41	24	6
≥5	1	8	16	8	2
≥10	1	7	13	6	1

1527

20

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	1	+	+	0
<6 & OR <2	0	1	1	2	0
VSBY <2	0	1	+	1	0
<10 & OR <2	+	4	2	2	+
<20 & OR <5	+	8	9	5	1
VSBY ≥5	8	32	34	19	2
≥50 & ≥5	7	18	16	6	+
NC & ≥10	6	13	12	3	+

513

21

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	1	+
<6 & OR <2	+	1	2	3	1
VSBY <2	0	+	1	1	1
<10 & OR <2	+	3	8	7	3
<20 & OR <5	+	7	19	16	6
VSBY ≥5	1	18	39	25	8
≥50 & ≥5	1	10	16	8	2
NC & ≥10	1	9	14	7	2

2979

22

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	1	1	1
<6 & OR <2	+	1	2	2	1
VSBY <2	+	+	1	1	1
<10 & OR <2	+	2	6	6	3
<20 & OR <5	+	6	17	14	5
VSBY ≥5	1	17	42	25	6
≥50 & ≥5	+	10	21	11	2
NC & ≥10	+	8	18	9	1

2284

23

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	1	1	1	2	1
<6 & OR <2	1	1	3	4	3
VSBY <2	+	1	1	2	2
<10 & OR <2	1	2	9	9	5
<20 & OR <5	1	7	18	16	8
VSBY ≥5	1	16	37	24	8
≥50 & ≥5	1	9	18	10	2
NC & ≥10	1	8	14	8	2

1199

24

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	1	1	1	1
<6 & OR <2	+	2	3	3	2
VSBY <2	+	1	1	1	1
<10 & OR <2	+	4	9	8	3
<20 & OR <5	1	8	19	16	6
VSBY ≥5	1	19	39	24	6
≥50 & ≥5	1	10	18	9	2
NC & ≥10	+	9	15	6	2

1264

25

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	1	+
<6 & OR <2	0	1	4	2	1
VSBY <2	0	+	1	+	1
<10 & OR <2	0	4	10	8	3
<20 & OR <5	+	7	21	15	5
VSBY ≥5	1	18	43	24	6
≥50 & ≥5	+	9	20	11	2
NC & ≥10	+	8	17	8	1

1707

29

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
<.5	+	+	1	1	0
<2	+	1	2	3	+
<2	0	+	1	1	+
<2	+	3	7	6	1
<5	+	8	22	15	2
≥5	2	25	44	18	2
≥5	1	15	15	3	+
≥10	1	12	12	2	+

2337

30

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	+
<6 & OR <2	0	1	2	1	+
VSBY <2	0	+	1	+	+
<10 & OR <2	0	3	7	3	1
<20 & OR <5	+	6	16	8	3
VSBY ≥5	2	23	47	19	5
≥50 & ≥5	2	15	26	9	2
NC & ≥10	2	14	24	8	2

1590

31

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	0	+	1	1	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	1	5	3	1
<20 & OR <5	+	4	11	6	1
VSBY ≥5	3	28	49	16	1
≥50 & ≥5	3	23	34	9	+
NC & ≥10	2	21	31	7	1

1938

32

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	+	1	+	+
VSBY <2	0	+	+	+	+
<10 & OR <2	+	2	6	3	+
<20 & OR <5	+	5	17	6	+
VSBY ≥5	3	23	55	17	1
≥50 & ≥5	2	16	34	9	+
NC & ≥10	2	16	33	8	+

3736

33

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	+	+	+
<6 & OR <2	+	+	1	+	+
VSBY <2	0	0	+	0	+
<10 & OR <2	+	1	4	2	+
<20 & OR <5	+	5	11	5	+
VSBY ≥5	3	27	54	14	1
≥50 & ≥5	2	18	29	6	+
NC & ≥10	2	15	24	5	+

1664

34

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	+	+	+	+	+
<6 & OR <2	+	+	2	2	+
VSBY <2	0	+	1	1	+
<10 & OR <2	+	1	7	7	1
<20 & OR <5	+	3	18	13	1
VSBY ≥5	+	11	56	22	1
≥50 & ≥5	+	9	37	11	+
NC & ≥10	+	7	29	6	+

4587

35

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	+
<6 & OR <2	+	+	2	3	1
VSBY <2	0	+	1	+	1
<10 & OR <2	+	1	5	8	3
<20 & OR <5	+	2	13	19	5
VSBY ≥5	1	9	36	35	6
≥50 & ≥5	1	7	23	18	2
NC & ≥10	1	7	19	12	1

5368

39

WIND SPEED (KNOTS)

BY	0-3	4-10	11-21	22-33	≥34
<5	0	0	0	0	0
<7	0	0	3	0	0
<2	0	0	0	0	0
<2	0	0	5	1	0
<5	0	1	13	1	0
≥5	1	8	78	13	0
≥5	1	7	62	10	0
≥10	1	6	55	9	0

204

40

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	1	+	0
<6 & OR <2	0	+	1	+	0
VSBY <2	0	0	0	1	0
<10 & OR <2	0	1	5	1	0
<20 & OR <5	1	3	11	3	+
VSBY ≥5	6	31	48	14	1
≥50 & ≥5	5	26	34	9	1
NC & ≥10	5	25	33	9	1

690

41

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	0	0	0
<6 & OR <2	0	0	0	1	0
VSBY <2	0	0	0	1	0
<10 & OR <2	+	0	3	2	+
<20 & OR <5	1	1	6	5	+
VSBY ≥5	3	17	60	18	1
≥50 & ≥5	1	15	51	12	+
NC & ≥10	1	15	50	12	0

208

42

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	+	1	3	1	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	4	12	2	+
<20 & OR <5	+	9	29	6	+
VSBY ≥5	1	23	65	9	+
≥50 & ≥5	1	12	30	2	+
NC & ≥10	1	12	29	0	+

771

43

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	+	+	0
<6 & OR <2	0	1	2	+	0
VSBY <2	0	0	+	+	0
<10 & OR <2	+	4	5	+	0
<20 & OR <5	1	9	12	+	0
VSBY ≥5	8	49	41	1	0
≥50 & ≥5	7	37	25	+	0
NC & ≥10	7	36	24	+	0

822

44

WIND SPEED (KNOTS)

LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	+	1	+	0
<6 & OR <2	+	1	3	1	0
VSBY <2	0	+	1	+	0
<10 & OR <2	+	3	11	3	0
<20 & OR <5	1	7	25	5	0
VSBY ≥5	2	27	53	8	+
≥50 & ≥5	2	19	28	4	+
NC & ≥10	1	16	20	2	0

2050

45

WIND SPEED (KNOTS)

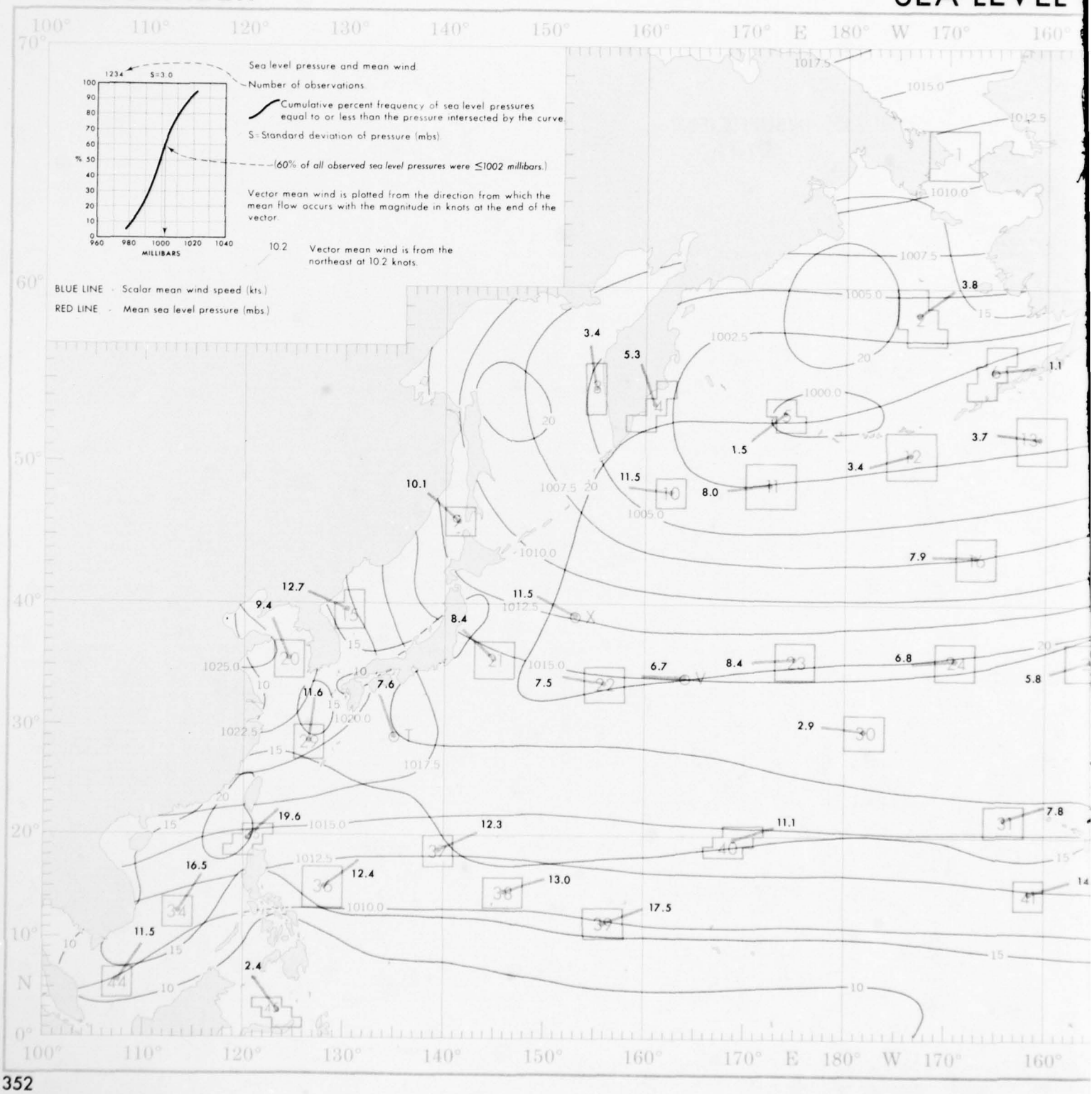
LCC - VSBY	0-3	4-10	11-21	22-33	≥34
<1.5 & OR <.5	0	0	3	0	0
<6 & OR <2	0	0	3	0	0
VSBY <2	0	0	0	0	0
<10 & OR <2	1	4	3	0	0
<20 & OR <5	3	6	4	0	0
VSBY ≥5	40	54	4	0	0
≥50 & ≥5	37	44	1	0	0
NC & ≥10	37	37	1	0	0

68

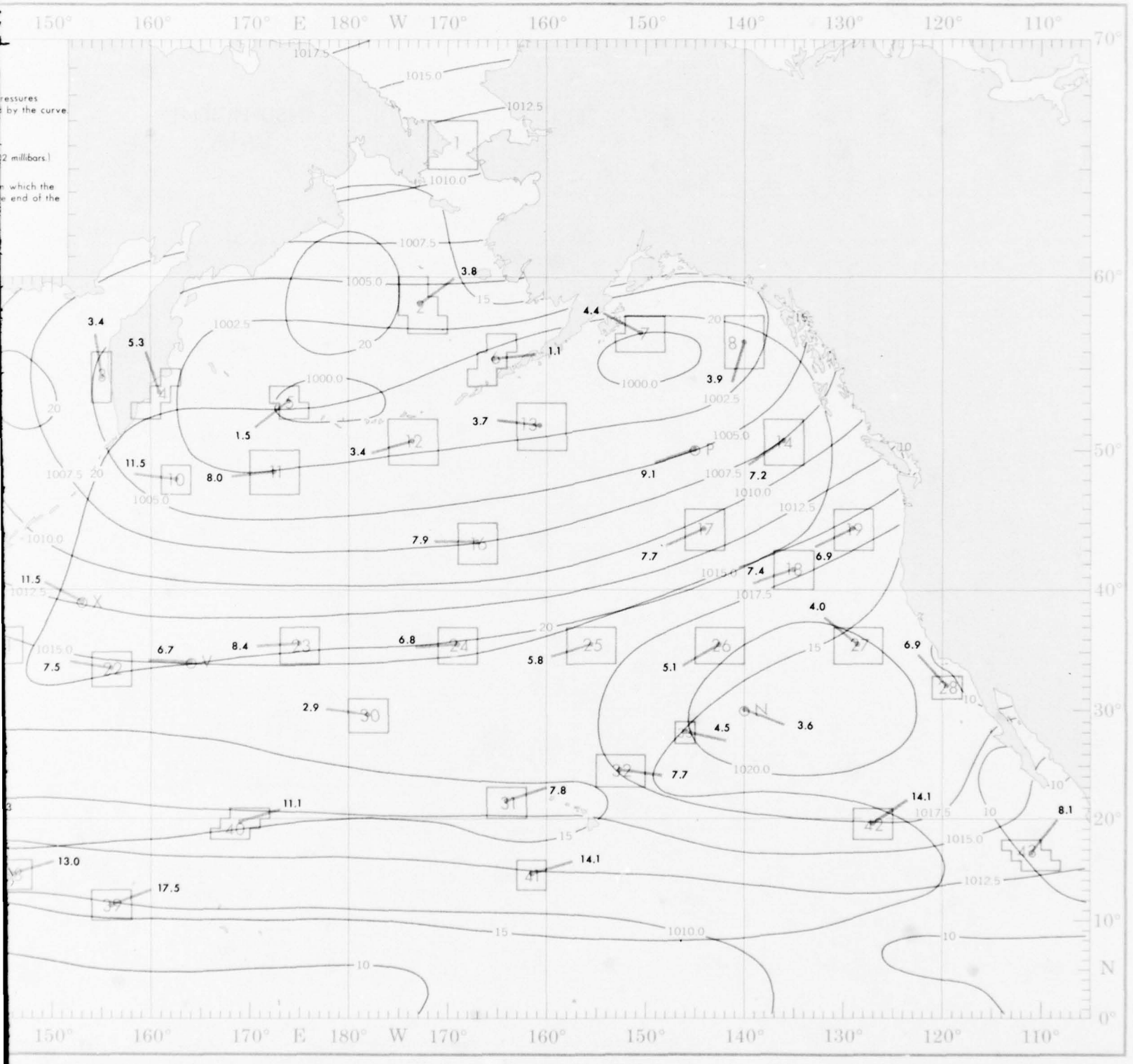
t the objective compilation of available data for specified areas without regard to suspected biases.
lyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

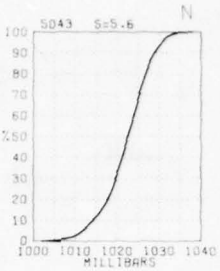
SEA LEVEL

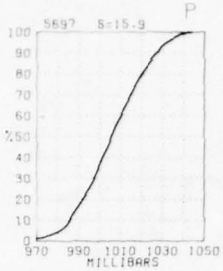


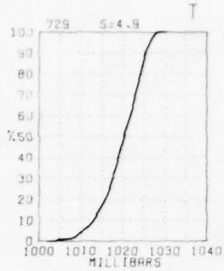
SEA LEVEL PRESSURE AND MEAN WIND

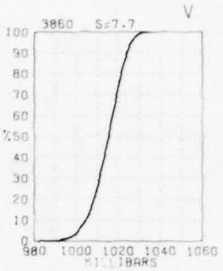


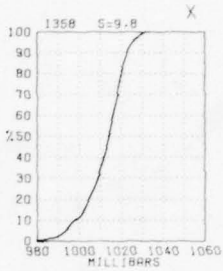
SEA LEVEL PRESSURE





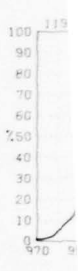


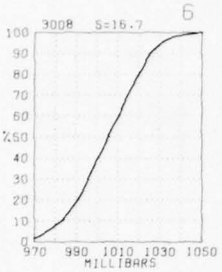


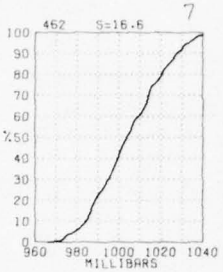


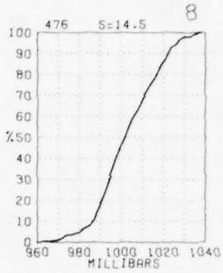
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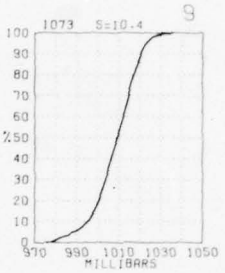
INSUFFICIENT DATA

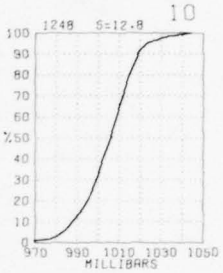


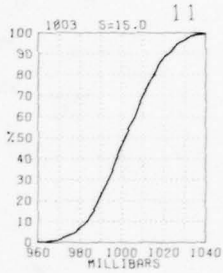


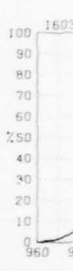


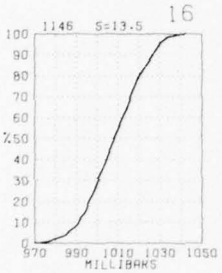


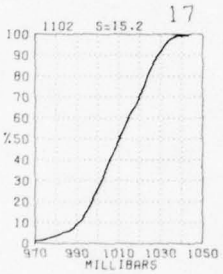


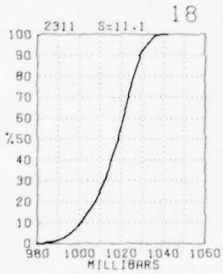


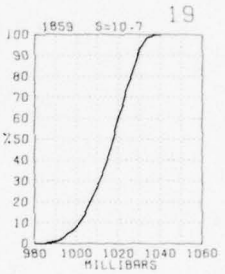


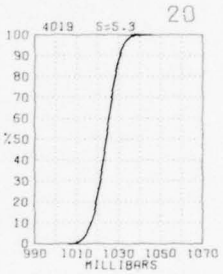


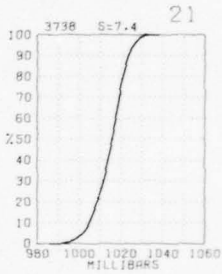


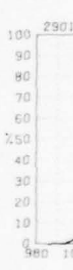


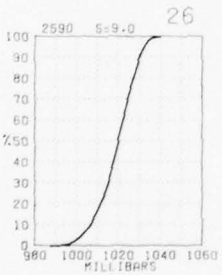


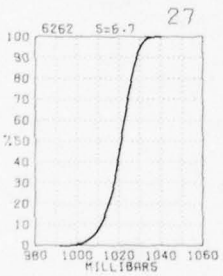


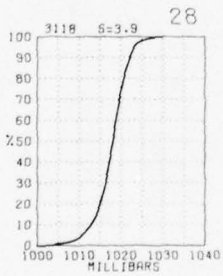


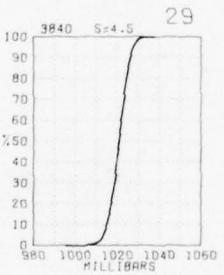


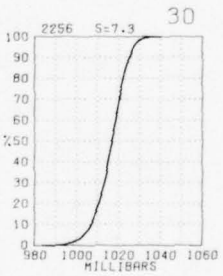


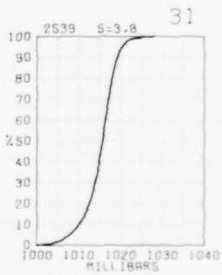


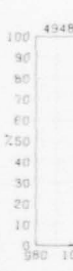


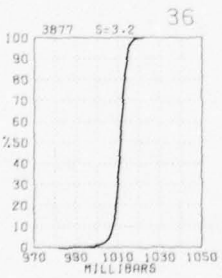


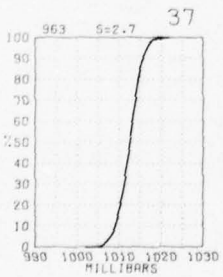


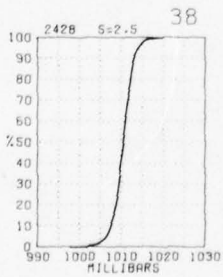


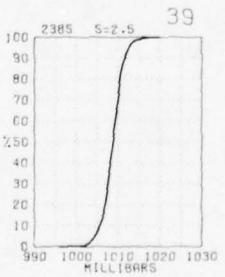


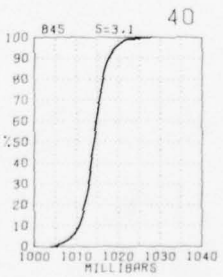


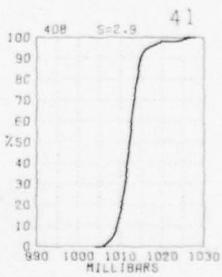


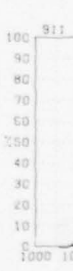






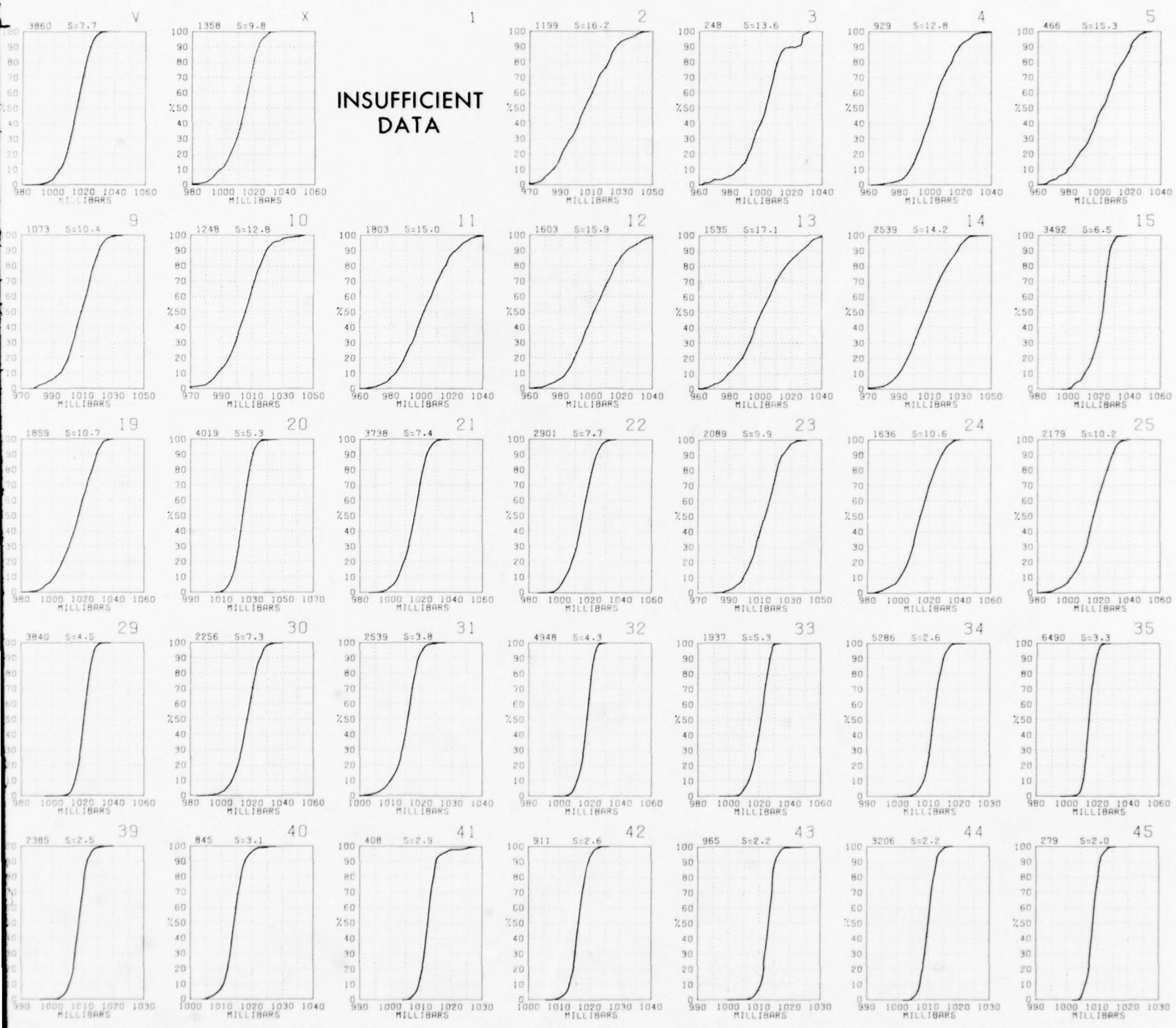






Graphs represent the objective compilation of available data for specified areas without rega
The isopleth analyses (opposite page) are based on all available data subjectively adjusted

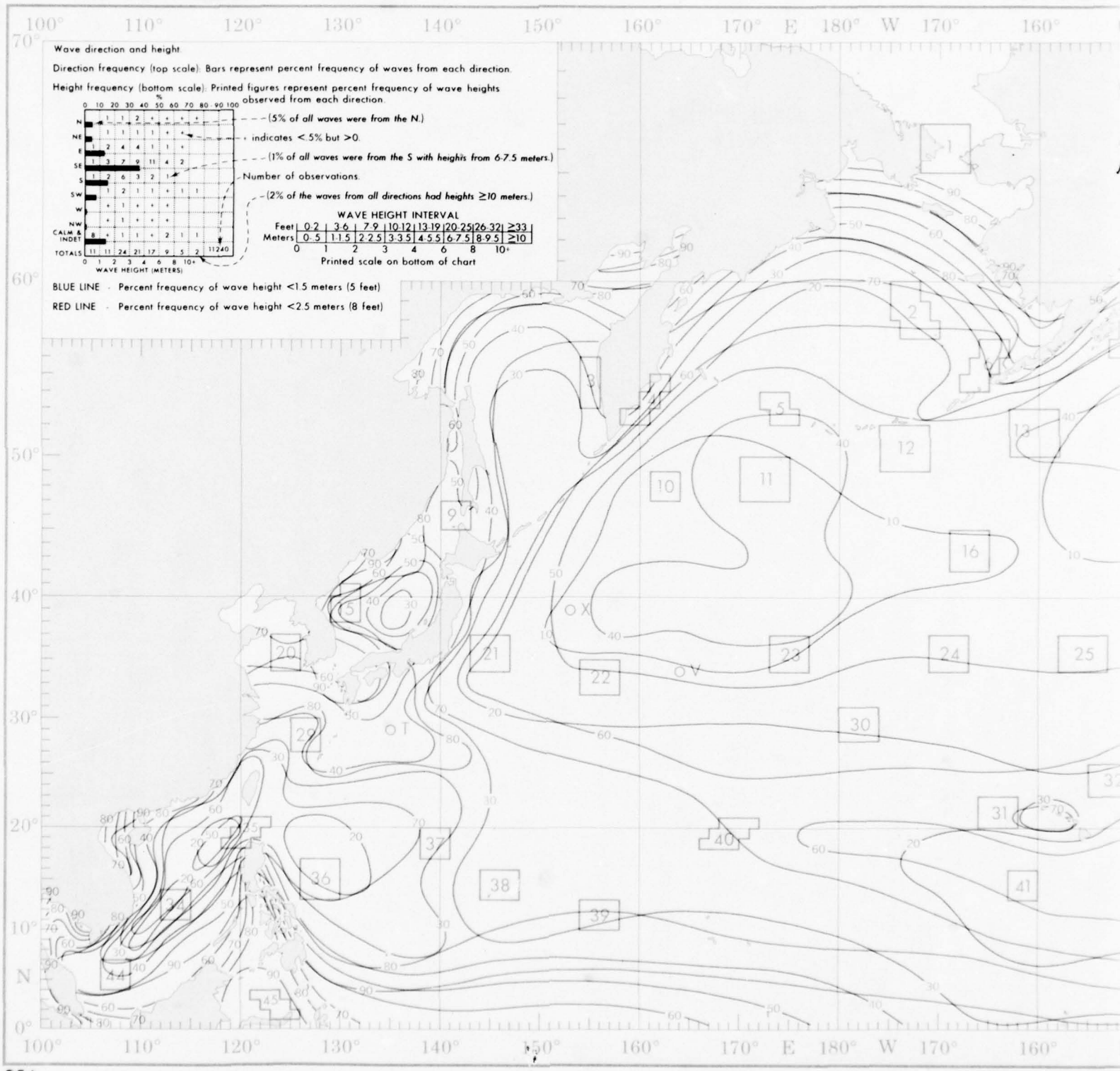
DECEMBER



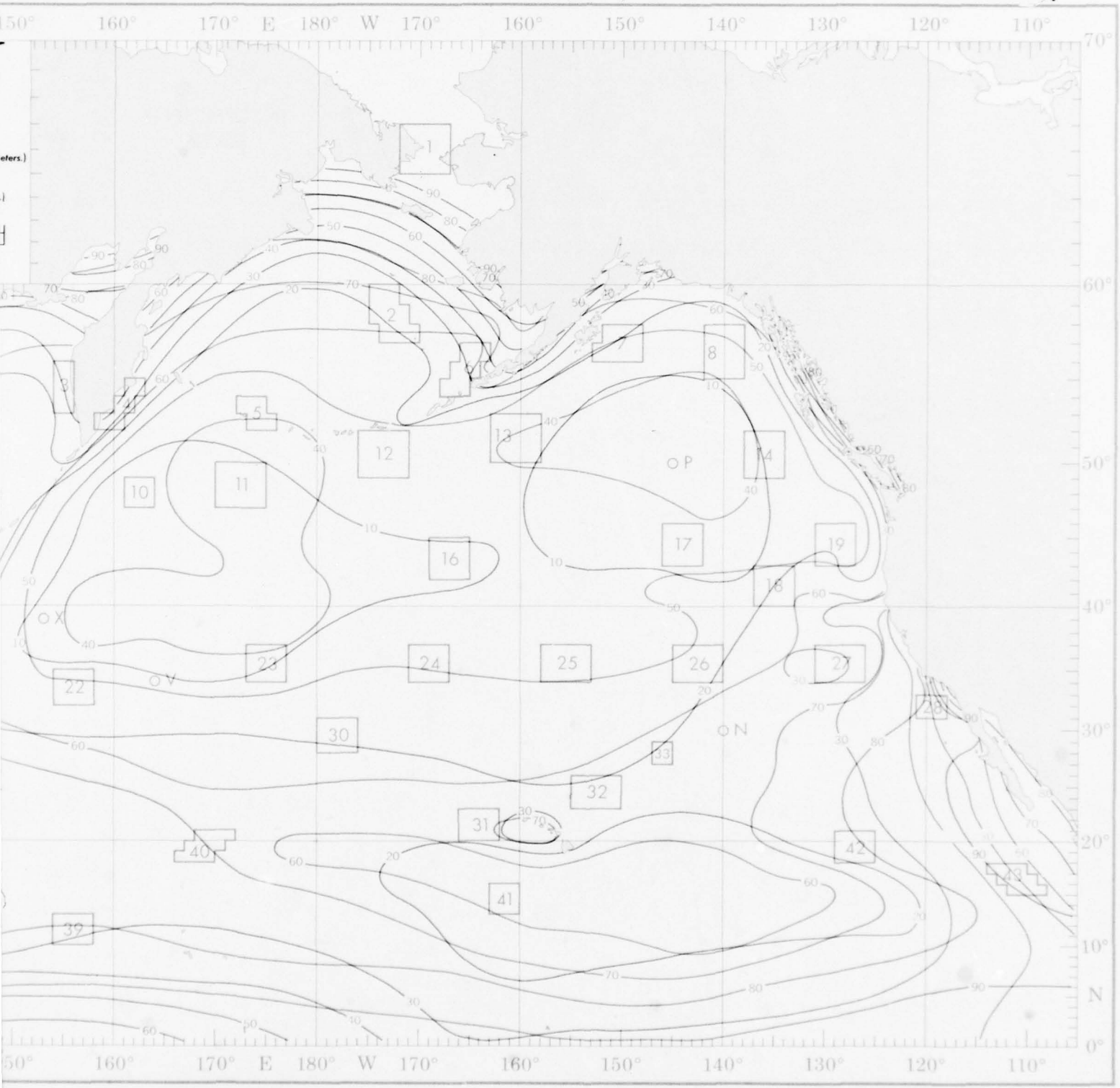
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h analyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

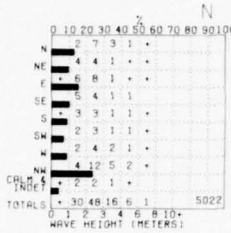
WAVES

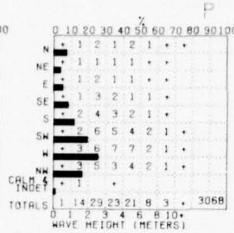


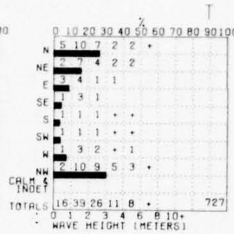
WAVES (<1.5 AND <2.5 METERS)

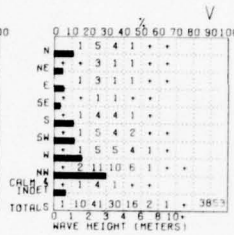


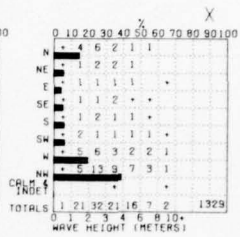
WAVE DIRECTION AND HEIGHT



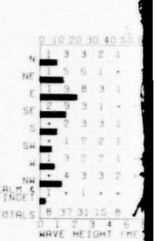


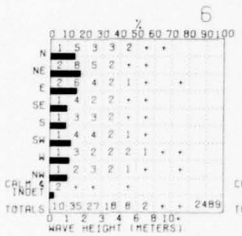


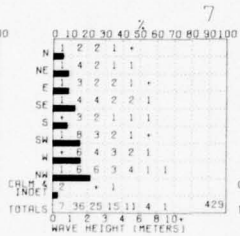


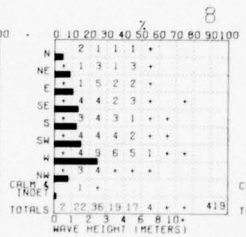


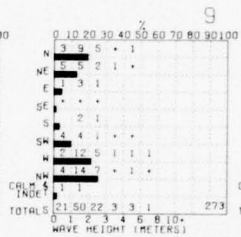
INSUFFICIENT DATA

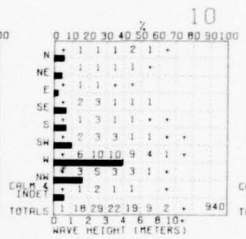


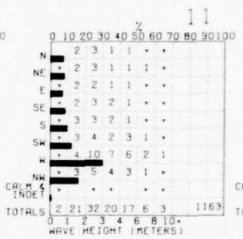


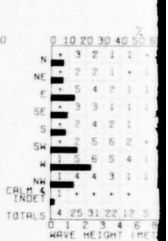


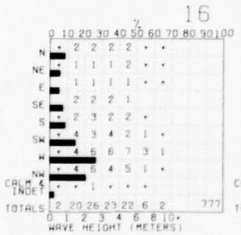


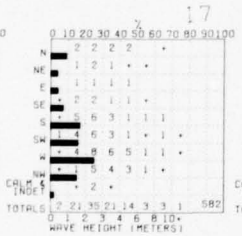


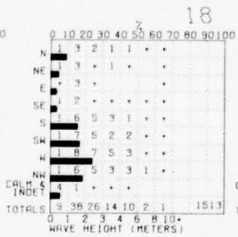


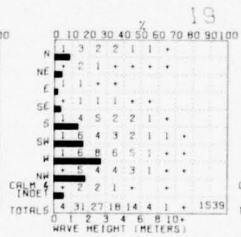


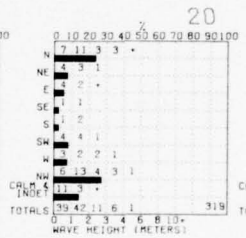


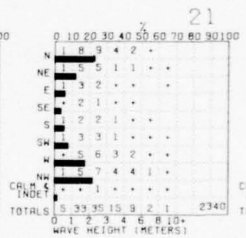


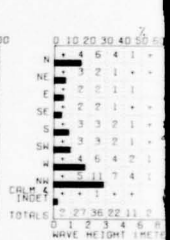


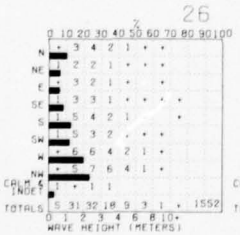


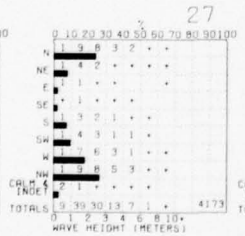


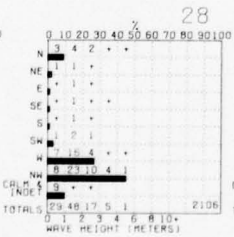


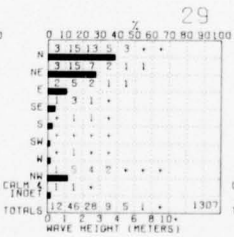


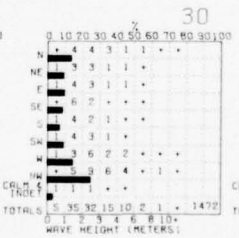


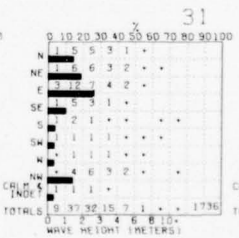


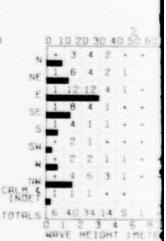


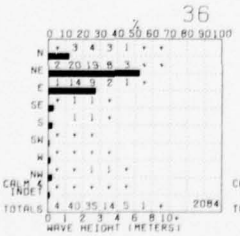


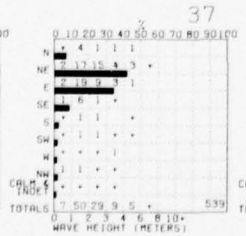


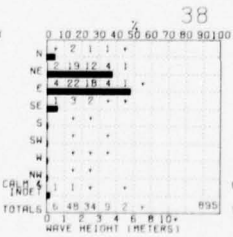


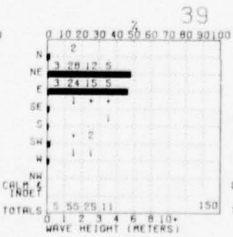


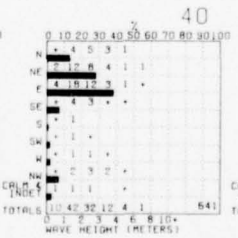


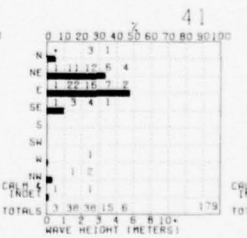


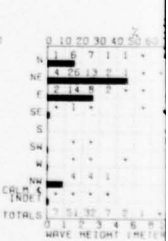










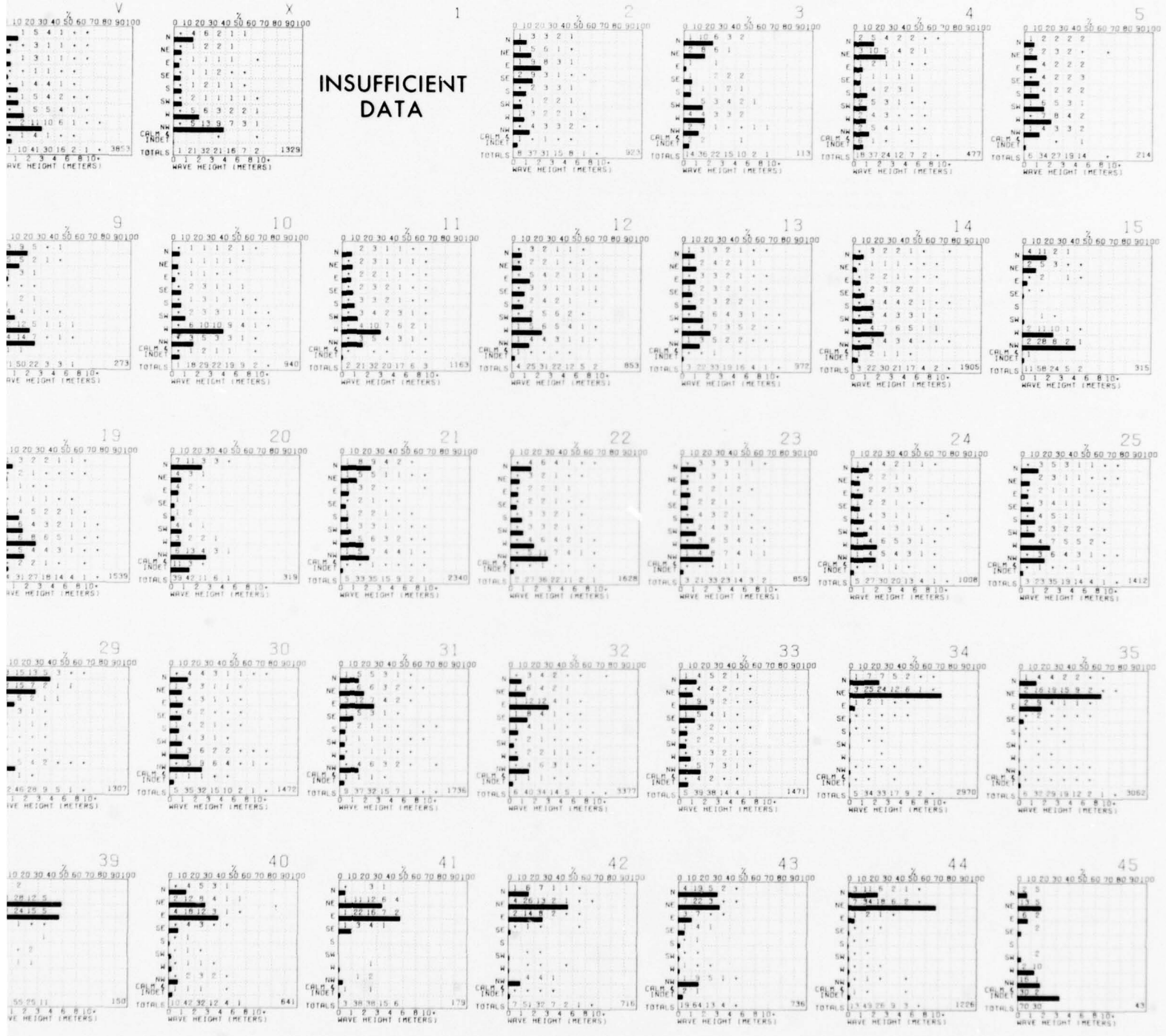


Graphs represent the objective compilation of available data for specified areas without regard to s
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where b

EIGHT

DECEMBER

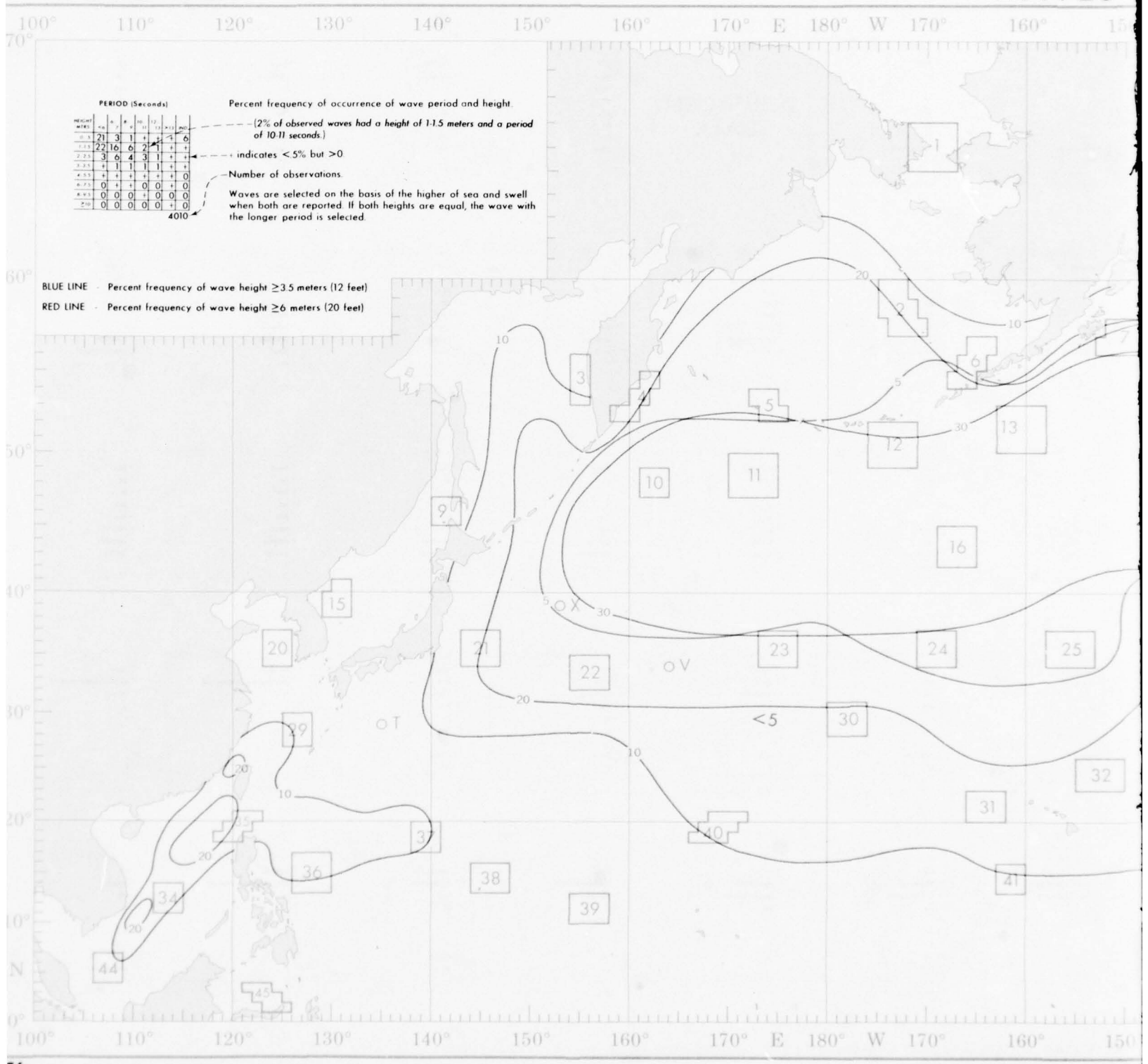
INSUFFICIENT DATA



ent the objective compilation of available data for specified areas without regard to suspected biases.
alyses (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER

WAVES



WAVES (≥3.5 AND ≥6 METERS)



WAVE PERIOD AND HEIGHT

N

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	0	0	0	0	0	+
1-1.5	7	14	5	2	+	+	2
2-2.5	4	19	13	8	2	+	2
3-3.5	+	4	5	3	2	1	1
4-5.5	+	1	2	1	1	1	+
6-7.5	0	+	+	+	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

5022

P

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	0	0	0	0	+
1-1.5	5	4	3	1	+	+	1
2-2.5	2	11	12	3	1	+	+
3-3.5	1	6	12	3	1	1	0
4-5.5	+	3	9	4	3	1	0
6-7.5	0	1	3	2	2	1	0
8-9.5	0	+	1	1	1	+	0
≥10	0	0	+	0	+	+	0

3071

T

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	12	3	0	0	0	0
1-1.5	0	13	26	0	0	0	0
2-2.5	0	5	21	+	0	0	0
3-3.5	0	+	9	1	+	0	0
4-5.5	0	1	5	2	0	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

730

V

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	+	+	+	+	0	0	+
1-1.5	2	4	2	1	+	0	1
2-2.5	4	15	13	4	1	+	4
3-3.5	1	7	13	7	2	+	1
4-5.5	+	2	7	4	2	+	+
6-7.5	0	+	1	1	+	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	+	0	0	0	0

3853

X

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	0	+	+	0	0	0	1
1-1.5	0	2	5	+	0	0	14
2-2.5	0	2	17	1	+	+	11
3-3.5	0	2	16	2	+	+	2
4-5.5	+	1	12	3	+	0	0
6-7.5	0	+	4	2	1	0	0
8-9.5	0	0	+	1	+	+	+
≥10	0	0	0	0	0	0	0

1329

INSUFFICIENT DATA

1

HEIGHT (MTRS)	PERIOD <6	6- 7	8- 9	10- 11
0-.5	4	0	1	
1-1.5	23	7	2	
2-2.5	13	13	4	
3-3.5	3	6	5	
4-5.5	1	3	4	
6-7.5	0	+	+	
8-9.5	0	0	+	
≥10	0	0	0	

6

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	21	8	4	1	+	+	1
2-2.5	10	10	3	2	+	+	1
3-3.5	2	9	4	1	+	+	1
4-5.5	1	2	4	1	1	+	+
6-7.5	0	1	+	+	+	+	+
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	+	0	+	0

2526

7

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	0	0	0	0	2
1-1.5	19	9	4	1	+	+	2
2-2.5	5	11	4	2	1	1	1
3-3.5	2	4	5	2	1	1	1
4-5.5	1	4	2	1	1	1	1
6-7.5	0	2	+	1	+	+	0
8-9.5	0	0	0	0	1	+	0
≥10	0	0	0	0	0	0	0

433

8

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	0	0	0	0	0	0
1-1.5	9	7	4	1	+	0	+
2-2.5	7	11	10	5	+	1	1
3-3.5	2	6	5	4	1	+	0
4-5.5	+	5	6	3	1	1	+
6-7.5	0	2	1	+	0	+	0
8-9.5	0	0	+	0	+	0	0
≥10	0	0	+	0	0	+	0

422

9

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	0	0	0	0	0	15
1-1.5	17	3	1	1	0	0	26
2-2.5	3	4	1	1	0	0	12
3-3.5	+	+	+	0	0	0	2
4-5.5	1	0	+	+	0	0	2
6-7.5	0	0	1	0	0	0	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	+	0

287

10

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	+	0	0	0	+
1-1.5	5	8	4	+	0	+	1
2-2.5	1	11	12	2	1	0	3
3-3.5	1	3	11	5	1	+	1
4-5.5	+	3	8	5	1	1	1
6-7.5	0	1	4	2	1	1	+
8-9.5	0	0	1	+	1	+	0
≥10	0	0	0	0	+	0	0

940

11

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	0	0	+	0	0	+
1-1.5	6	9	4	1	+	+	1
2-2.5	2	8	14	6	1	+	1
3-3.5	1	4	4	5	3	2	+
4-5.5	+	3	5	3	3	2	+
6-7.5	0	+	1	2	2	1	+
8-9.5	0	0	1	1	1	1	+
≥10	0	0	0	0	0	0	0

1158

16

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	0	+	0	0	0	1
1-1.5	6	8	4	1	0	+	1
2-2.5	3	6	10	4	1	1	1
3-3.5	1	5	8	6	2	1	+
4-5.5	1	3	8	7	2	1	1
6-7.5	0	2	2	1	1	+	+
8-9.5	0	+	1	+	1	0	0
≥10	0	0	0	0	0	0	0

779

17

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	1	+	0	0	0	0	1
1-1.5	8	8	3	2	1	0	+
2-2.5	2	11	11	6	1	2	2
3-3.5	1	5	5	5	3	2	+
4-5.5	1	2	5	3	3	1	0
6-7.5	0	+	1	1	+	2	0
8-9.5	0	0	1	0	+	1	+
≥10	0	+	+	+	0	0	0

583

18

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	+	+	+	0	0	4
1-1.5	22	10	4	2	+	+	1
2-2.5	4	9	7	3	1	+	1
3-3.5	1	5	4	2	2	0	1
4-5.5	+	1	3	2	1	2	+
6-7.5	0	+	+	+	+	1	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	0	0	0	0	0

1516

19

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	1	+	0	0	0	+
1-1.5	15	10	3	1	1	+	+
2-2.5	4	11	7	4	1	+	+
3-3.5	1	6	6	3	1	1	+
4-5.5	1	3	5	3	1	1	+
6-7.5	0	+	1	1	1	1	0
8-9.5	0	+	+	+	+	+	+
≥10	0	0	+	0	+	0	0

1542

20

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	29	0	1	0	0	0	12
1-1.5	25	10	3	0	0	0	3
2-2.5	2	5	2	1	0	0	1
3-3.5	+	1	2	2	1	0	0
4-5.5	0	1	+	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

331

21

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	14	12	4	1	+	+	1
2-2.5	5	14	9	4	1	+	1
3-3.5	1	3	5	3	2	1	+
4-5.5	+	2	3	2	1	1	1
6-7.5	0	+	+	+	+	+	+
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

2361

26

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	11	10	5	2	1	+	2
2-2.5	4	10	10	5	2	1	1
3-3.5	1	5	5	4	1	1	1
4-5.5	1	2	2	2	2	1	+
6-7.5	0	+	1	1	+	+	+
8-9.5	0	0	+	+	+	+	0
≥10	0	0	+	0	0	0	0

1568

27

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	1	+	0	0	3
1-1.5	16	12	6	2	1	+	2
2-2.5	4	9	9	4	2	+	1
3-3.5	1	4	3	2	1	1	+
4-5.5	+	1	2	2	1	1	+
6-7.5	0	+	+	+	+	+	+
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

4274

28

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	16	3	1	1	0	0	10
1-1.5	25	14	5	2	+	+	1
2-2.5	3	6	4	2	1	+	+
3-3.5	+	2	1	1	1	+	+
4-5.5	+	+	+	+	+	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

2147

29

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	10	1	+	+	0	0	1
1-1.5	21	18	4	+	+	+	2
2-2.5	5	10	9	3	+	+	1
3-3.5	1	2	3	2	+	+	+
4-5.5	+	1	1	2	1	0	0
6-7.5	0	0	+	+	+	+	0
8-9.5	0	0	0	+	0	+	0
≥10	0	0	0	0	0	0	0

1326

30

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	15	12	4	1	+	+	1
2-2.5	4	11	10	4	2	+	1
3-3.5	1	3	6	3	1	+	1
4-5.5	1	1	4	2	1	1	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	+	1	0	+	0
≥10	0	0	0	+	0	+	0

1489

31

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	18	11	4	1	1	+	1
2-2.5	5	9	9	4	3	1	2
3-3.5	1	4	5	3	1	1	1
4-5.5	+	1	2	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	0	0	+	0	0
≥10	0	+	0	0	+	0	0

1755

36

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	3	+	+	+	0	0	+
1-1.5	17	16	5	1	+	0	1
2-2.5	4	10	14	5	2	1	+
3-3.5	1	2	6	3	1	+	+
4-5.5	+	1	2	2	1	0	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	+	+	0	0
≥10	0	0	0	0	0	0	0

2092

37

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	1	0	0	0	1
1-1.5	23	19	6	1	0	0	1
2-2.5	4	12	9	3	1	+	0
3-3.5	1	1	4	2	0	+	0
4-5.5	+	2	1	1	1	+	0
6-7.5	0	0	0	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

544

38

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	6	1	0	0	0	0	1
1-1.5	22	15	6	2	1	+	1
2-2.5	6	14	8	4	1	+	1
3-3.5	+	3	3	3	1	+	0
4-5.5	+	1	1	+	+	0	0
6-7.5	0	0	+	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

904

39

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	5	1	0	0	0	0	0
1-1.5	30	17	4	1	1	0	1
2-2.5	3	9	9	8	0	1	0
3-3.5	1	4	2	3	1	1	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	1	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

150

40

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	16	16	6	1	1	+	1
2-2.5	6	13	7	3	1	1	+
3-3.5	1	2	3	2	2	1	+
4-5.5	0	+	1	1	+	+	+
6-7.5	0	0	1	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

651

41

HEIGHT (MTRS)	PERIOD (SECONDS) <6	6-7	8-9	10-11	12-13	>13	IND
0-.5	2	1	1	1	0	0	1
1-1.5	11	16	10	1	0	0	1
2-2.5	3	19	12	2	1	0	2
3-3.5	1	6	6	1	2	1	0
4-5.5	0	1	2	2	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

181

Graphs represent the objective compilation of available data for specified areas without regard to
The isopleth analyses (opposite page) are based on all available data subjectively adjusted where

DECEMBER

INSUFFICIENT DATA

1

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	0	+	+	0	0	0	1
1-1.5	0	2	5	+	0	0	14
2-2.5	0	2	17	1	+	+	11
3-3.5	0	2	16	2	+	+	2
4-5.5	+	1	12	3	+	0	0
6-7.5	0	+	4	2	1	0	0
8-9.5	0	0	+	1	+	+	+
≥10	0	0	0	0	0	0	0

1329

2

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	0	1	1	0	0	3
1-1.5	23	7	2	1	+	+	4
2-2.5	13	13	4	0	+	+	1
3-3.5	3	6	5	+	+	0	1
4-5.5	1	3	4	0	0	+	1
6-7.5	0	+	+	0	0	+	0
8-9.5	0	0	+	0	0	+	0
≥10	0	0	0	0	0	0	0

933

3

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	5	0	0	0	0	0	10
1-1.5	14	8	2	0	0	0	12
2-2.5	5	2	3	0	0	1	11
3-3.5	4	4	4	0	0	1	4
4-5.5	1	1	4	0	1	0	3
6-7.5	0	1	0	0	0	0	1
8-9.5	0	0	0	0	0	0	1
≥10	0	0	0	0	0	0	0

114

4

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	10	1	+	0	0	0	9
1-1.5	19	7	3	1	1	+	5
2-2.5	8	8	3	1	+	0	2
3-3.5	2	3	4	1	+	0	2
4-5.5	+	2	2	1	1	+	1
6-7.5	0	+	0	+	0	+	1
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

492

5

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	+	0	+	+	0	0	6
1-1.5	14	3	3	0	0	0	13
2-2.5	5	7	6	+	+	0	7
3-3.5	1	7	7	1	+	0	3
4-5.5	1	2	7	2	0	0	1
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	+	0	0	0	0
≥10	0	0	0	0	0	0	0

216

9

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	1	1	0	0	0	0	26
1-1.5	1	1	0	0	0	0	12
2-2.5	+	0	0	0	0	0	2
3-3.5	+	+	0	0	0	0	2
4-5.5	1	0	0	0	0	+	+
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

287

10

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	1	+	+	0	0	0	+
1-1.5	5	8	4	+	0	+	1
2-2.5	1	11	12	2	1	0	3
3-3.5	1	3	11	5	1	+	1
4-5.5	+	3	8	5	1	1	1
6-7.5	0	1	4	2	1	1	+
8-9.5	0	0	1	+	1	+	0
≥10	0	0	0	0	+	0	0

940

11

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	2	0	0	+	0	0	+
1-1.5	6	9	4	1	+	+	+
2-2.5	2	8	14	6	1	+	1
3-3.5	1	4	4	5	3	2	+
4-5.5	+	3	5	3	3	2	+
6-7.5	0	+	1	2	2	1	+
8-9.5	0	0	1	1	1	1	+
≥10	0	0	0	0	0	0	0

1158

12

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	+	+	0	0	0	1
1-1.5	9	11	3	+	+	+	1
2-2.5	2	11	11	5	1	+	0
3-3.5	1	5	8	4	2	1	1
4-5.5	+	3	3	3	1	2	+
6-7.5	0	1	1	1	1	1	0
8-9.5	0	0	0	+	+	1	0
≥10	0	0	0	0	0	0	0

866

13

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	2	+	+	+	0	0	1
1-1.5	7	10	4	1	1	+	+
2-2.5	4	9	13	5	1	+	+
3-3.5	1	5	5	5	2	1	+
4-5.5	+	3	6	4	2	1	+
6-7.5	0	1	1	1	1	+	0
8-9.5	0	+	1	0	+	+	+
≥10	0	0	0	+	0	+	0

977

14

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	1	+	+	0	0	0	1
1-1.5	10	6	2	1	1	+	2
2-2.5	6	12	7	3	1	+	1
3-3.5	1	7	7	3	2	1	1
4-5.5	1	3	7	3	2	1	+
6-7.5	0	+	2	2	+	+	+
8-9.5	0	+	+	+	1	+	+
≥10	0	+	0	0	+	0	0

1907

15

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	10	0	0	0	0	0	1
1-1.5	53	5	0	0	0	0	0
2-2.5	12	8	3	2	0	0	0
3-3.5	3	1	+	0	0	0	0
4-5.5	1	1	+	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

316

19

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	0	0	0	0	0	0	+
1-1.5	3	1	1	+	+	+	+
2-2.5	7	4	1	+	+	+	+
3-3.5	6	3	1	1	+	+	+
4-5.5	5	3	1	1	+	+	+
6-7.5	1	1	1	1	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	+	0	+	0	0	0	0

1542

20

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	29	0	1	0	0	0	12
1-1.5	25	10	3	0	0	0	3
2-2.5	2	5	2	1	0	0	1
3-3.5	+	1	2	2	1	0	0
4-5.5	0	1	+	0	0	+	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

331

21

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	14	12	4	1	+	+	1
2-2.5	5	14	9	4	1	+	1
3-3.5	1	3	5	3	2	1	+
4-5.5	+	2	3	2	1	1	1
6-7.5	0	+	+	+	+	+	+
8-9.5	0	+	+	+	+	+	0
≥10	0	0	0	0	0	0	0

2361

22

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	2	+	+	0	0	0	1
1-1.5	11	11	3	1	1	0	1
2-2.5	4	12	13	5	1	+	1
3-3.5	1	4	7	6	2	1	+
4-5.5	1	2	3	3	1	1	+
6-7.5	0	+	1	+	+	1	0
8-9.5	0	+	0	0	+	+	0
≥10	0	0	0	0	0	0	0

1635

23

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	3	1	+	0	0	0	+
1-1.5	9	7	2	1	1	+	+
2-2.5	4	10	10	6	1	1	1
3-3.5	2	4	7	6	4	1	+
4-5.5	+	2	3	4	2	2	1
6-7.5	0	+	+	1	+	1	0
8-9.5	0	+	+	1	0	+	0
≥10	0	0	0	0	0	0	0

868

24

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	+	+	+	0	0	1
1-1.5	10	10	3	1	1	+	1
2-2.5	4	10	8	5	2	+	1
3-3.5	2	5	6	4	2	1	1
4-5.5	1	2	4	3	1	1	1
6-7.5	0	+	1	+	1	1	+
8-9.5	0	0	+	1	+	+	+
≥10	0	0	+	+	0	0	0

1017

25

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	2	+	+	0	0	0	+
1-1.5	8	9	3	1	1	+	1
2-2.5	5	11	11	5	2	1	1
3-3.5	+	5	7	4	2	1	+
4-5.5	+	2	4	3	2	2	1
6-7.5	0	+	1	2	1	1	0
8-9.5	0	+	+	+	+	+	+
≥10	0	0	0	+	0	+	0

1417

29

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	+	0	0	0	0	0	1
1-1.5	4	+	+	+	0	0	2
2-2.5	9	3	+	+	+	+	1
3-3.5	3	2	+	+	+	+	+
4-5.5	1	2	1	0	0	+	0
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	0	+	0	+	0
≥10	0	0	0	0	0	0	0

1326

30

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	15	12	4	1	+	+	1
2-2.5	4	11	10	4	2	+	1
3-3.5	1	3	6	3	1	+	1
4-5.5	1	1	4	2	1	1	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	+	+	1	0	+	0
≥10	0	0	0	+	0	+	0

1489

31

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	7	1	+	+	0	0	1
1-1.5	18	11	4	1	1	+	1
2-2.5	5	9	9	4	3	1	2
3-3.5	1	4	5	3	1	1	1
4-5.5	+	1	2	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	+	0	0
≥10	0	+	0	0	+	0	0

1755

32

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	5	1	+	+	0	0	1
1-1.5	16	14	6	1	1	+	1
2-2.5	6	11	10	3	2	1	1
3-3.5	1	4	3	2	2	1	1
4-5.5	+	1	1	1	1	+	+
6-7.5	0	+	+	+	+	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	+	0

3419

33

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	1	+	+	0	0	1
1-1.5	12	13	6	2	1	+	4
2-2.5	4	12	13	4	2	1	2
3-3.5	1	4	5	2	1	1	+
4-5.5	+	1	1	1	1	+	+
6-7.5	0	0	+	+	+	+	+
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1487

34

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	4	1	+	0	0	0	+
1-1.5	15	14	4	1	+	0	1
2-2.5	4	11	11	5	1	+	+
3-3.5	1	4	6	4	2	1	+
4-5.5	+	1	3	2	1	1	+
6-7.5	0	+	+	1	+	+	0
8-9.5	0	0	0	+	+	0	0
≥10	0	0	0	0	0	0	0

2981

35

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	5	1	+	0	0	0	+
1-1.5	14	13	3	1	+	0	+
2-2.5	4	9	12	3	1	+	+
3-3.5	1	4	7	4	2	+	+
4-5.5	1	2	3	3	2	1	+
6-7.5	0	+	1	1	+	+	+
8-9.5	0	+	0	+	0	0	0
≥10	0	0	+	0	0	0	0

3078

39

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	0	0	0	0	0	0	0
1-1.5	4	1	1	0	1	0	1
2-2.5	9	8	0	1	0	0	0
3-3.5	2	3	1	1	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

150

40

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	8	1	+	+	0	0	2
1-1.5	16	16	6	1	1	+	1
2-2.5	6	13	7	3	1	1	+
3-3.5	1	2	3	2	2	1	+
4-5.5	0	+	1	1	+	+	+
6-7.5	0	0	1	0	+	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

651

41

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	2	1	1	1	0	0	1
1-1.5	11	16	10	1	0	0	1
2-2.5	3	19	12	2	1	0	2
3-3.5	1	6	6	1	2	1	0
4-5.5	0	1	2	2	1	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

181

42

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	6	1	0	0	0	0	1
1-1.5	23	15	6	1	1	1	3
2-2.5	5	12	8	2	1	1	1
3-3.5	1	2	2	1	1	+	1
4-5.5	0	1	+	+	+	+	+
6-7.5	0	+	+	0	0	0	0
8-9.5	0	0	0	+	0	0	0
≥10	0	0	0	0	0	0	0

725

43

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	14	2	1	+	0	0	4
1-1.5	29	19	6	2	1	1	4
2-2.5	1	5	3	1	1	+	1
3-3.5	1	1	1	1	+	+	0
4-5.5	0	0	0	0	+	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

760

44

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	11	1	0	+	0	0	3
1-1.5	20	19	5	1	+	+	2
2-2.5	4	7	8	4	1	+	1
3-3.5	+	2	3	2	+	+	+
4-5.5	0	1	1	+	+	+	+
6-7.5	0	0	+	0	0	+	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

1258

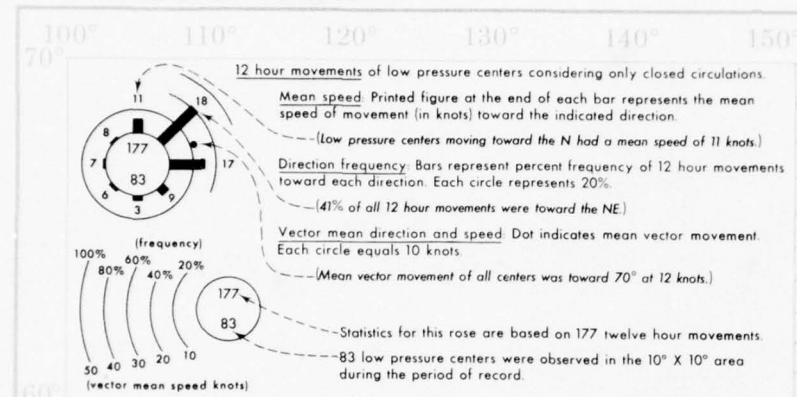
45

HEIGHT (MTRS)	PERIOD (SECONDS) 6-	8-	10-	12-	13	>13	IND
0-.5	40	4	4	0	0	0	25
1-1.5	10	6	4	2	2	0	2
2-2.5	0	0	0	0	0	0	0
3-3.5	0	0	0	0	0	0	0
4-5.5	0	0	0	0	0	0	0
6-7.5	0	0	0	0	0	0	0
8-9.5	0	0	0	0	0	0	0
≥10	0	0	0	0	0	0	0

48

he objective compilation of available data for specified areas without regard to suspected biases.
es (opposite page) are based on all available data subjectively adjusted where bias was evident.

DECEMBER



12 hour movements of low pressure centers considering only closed circulations.

Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.

(Low pressure centers moving toward the N had a mean speed of 11 knots.)

Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.

(41% of all 12 hour movements were toward the NE.)

Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.

(Mean vector movement of all centers was toward 70° at 12 knots.)

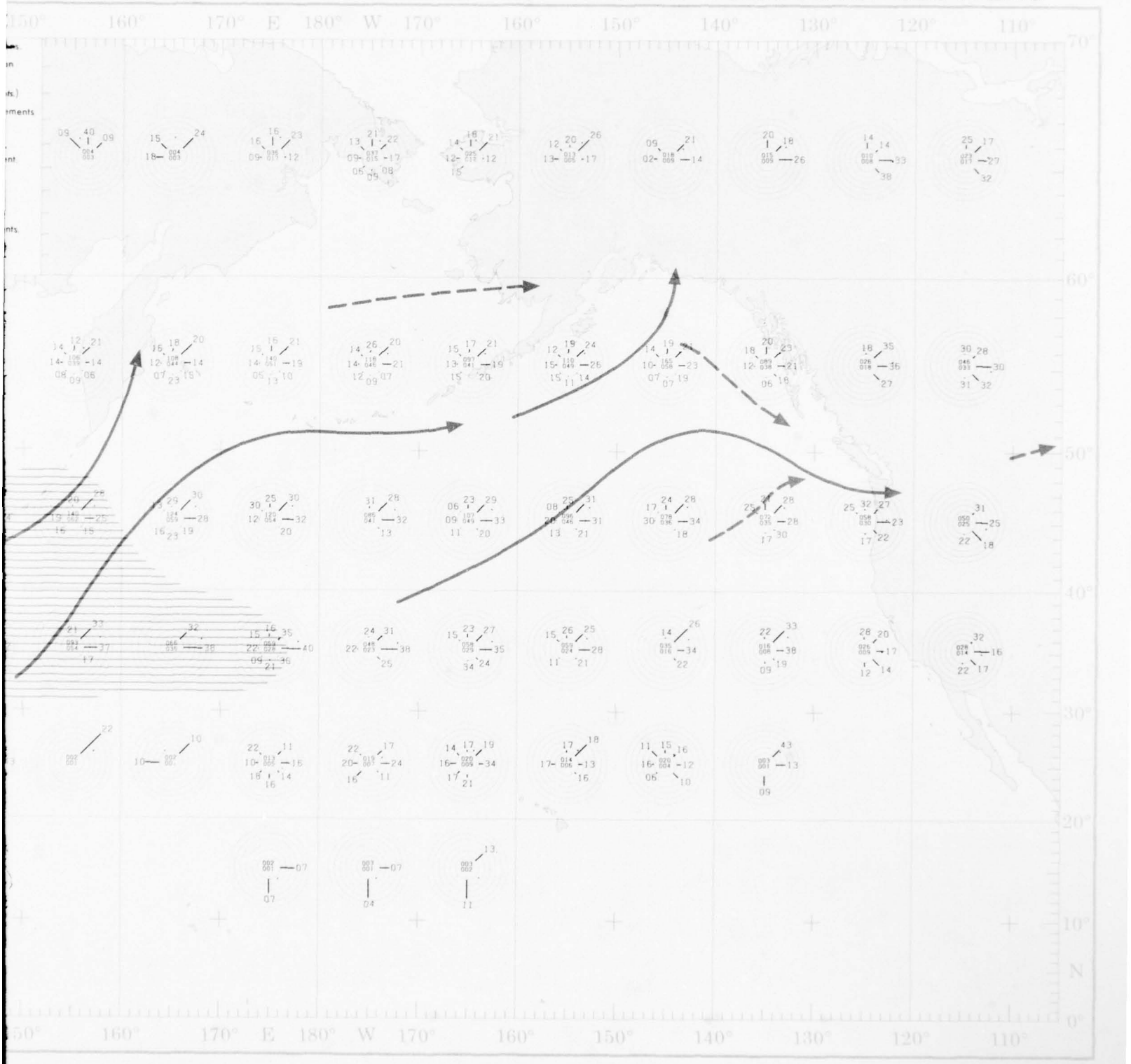
Statistics for this rose are based on 177 twelve hour movements.

83 low pressure centers were observed in the 10° X 10° area during the period of record.

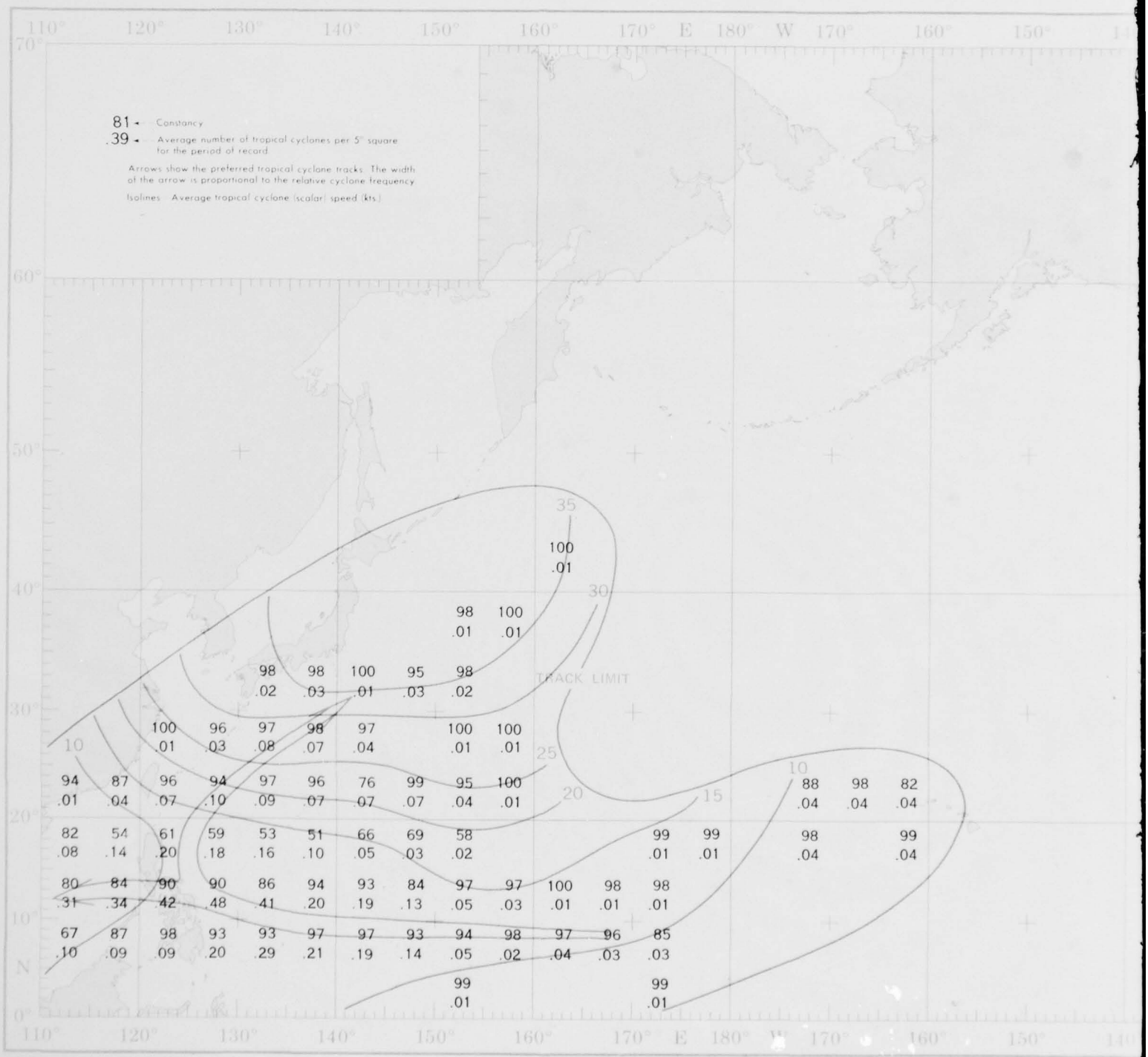
BLUE ARROWS - Preferred storm tracks (solid for primary tracks, dashed for secondary tracks)

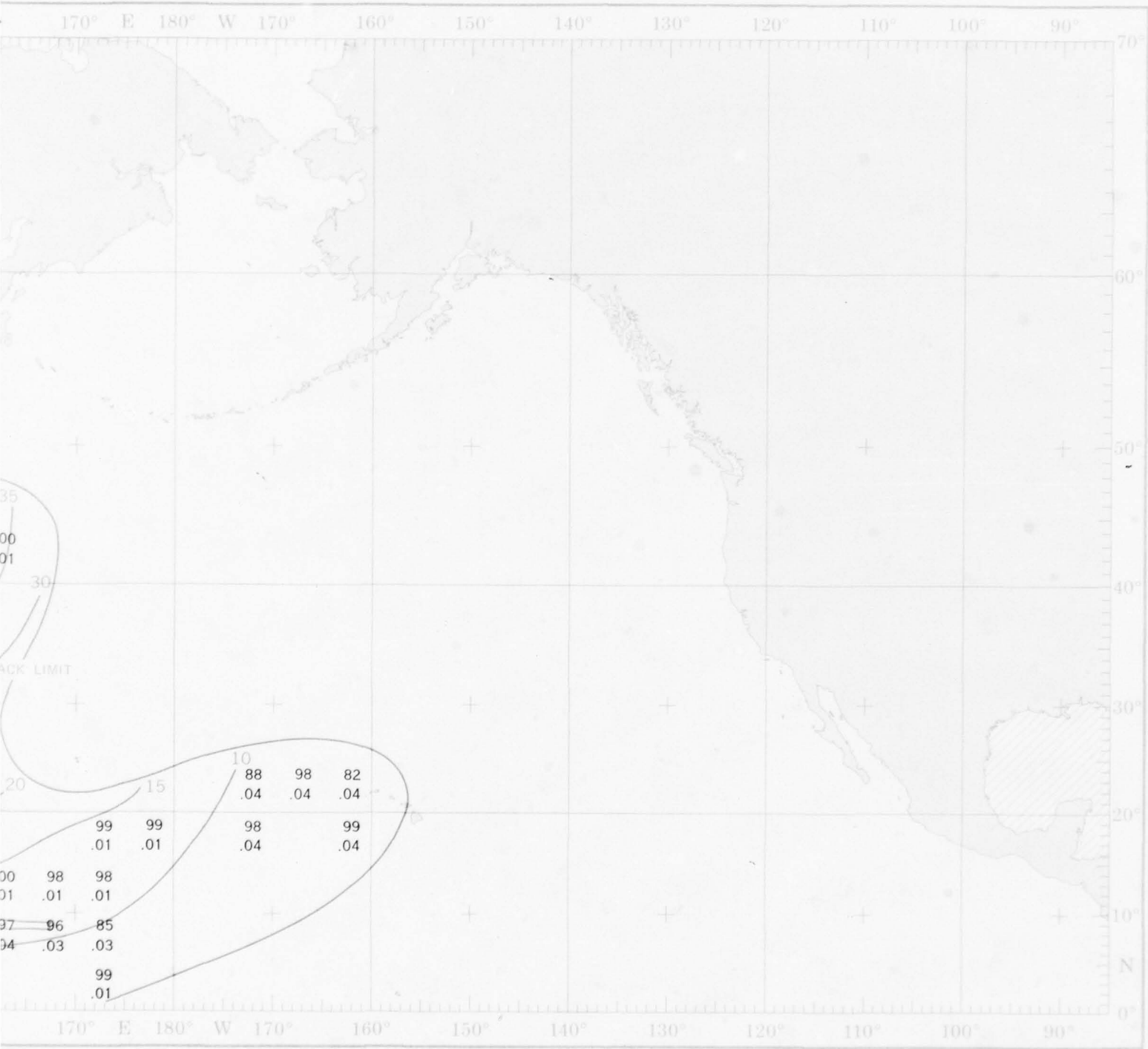
RED HATCHING-Principal areas of cyclogenesis (over oceanic areas)

LOW PRESSURE CENTERS

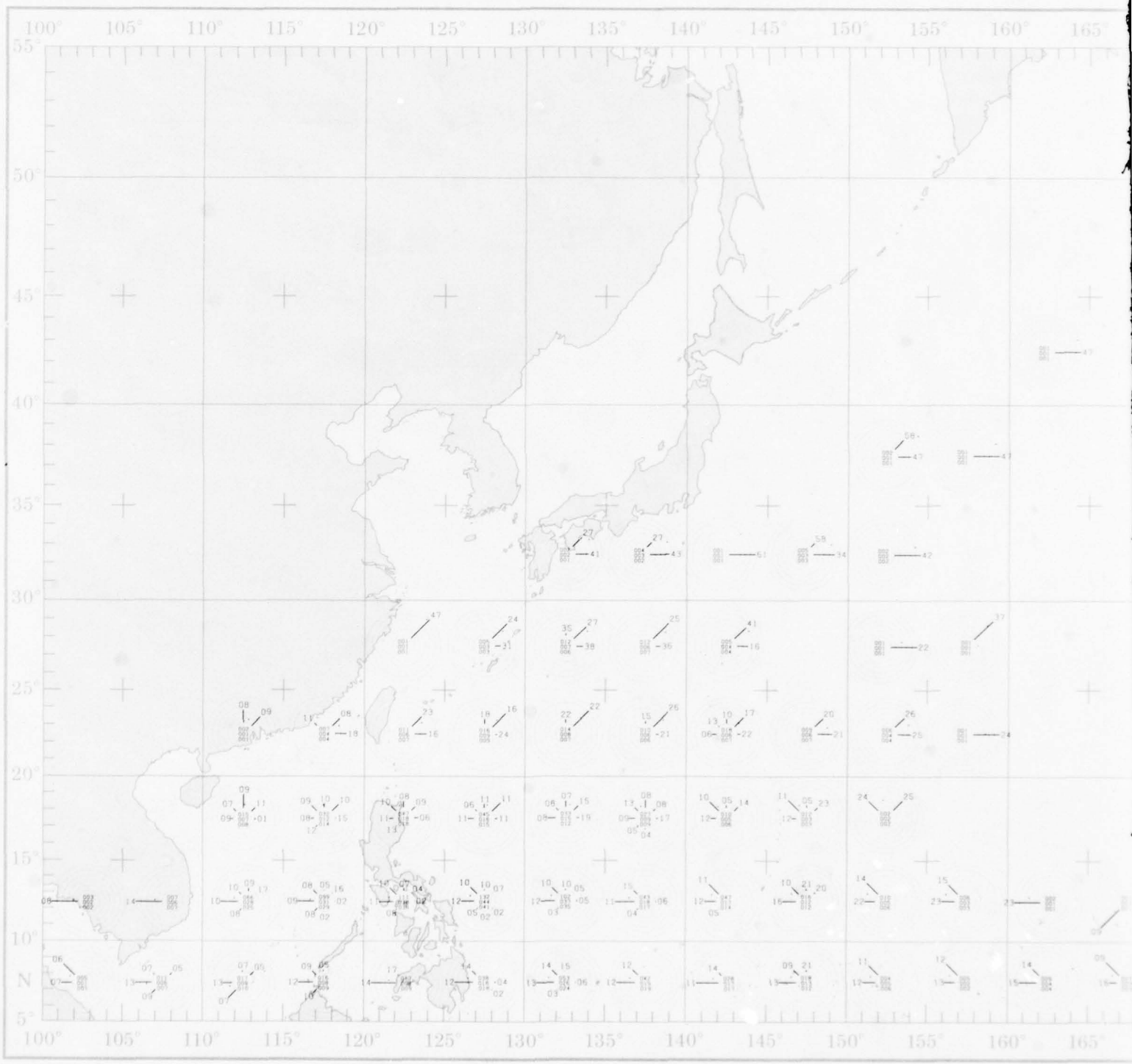


TROPICAL CYCLONE CHARACTERISTICS

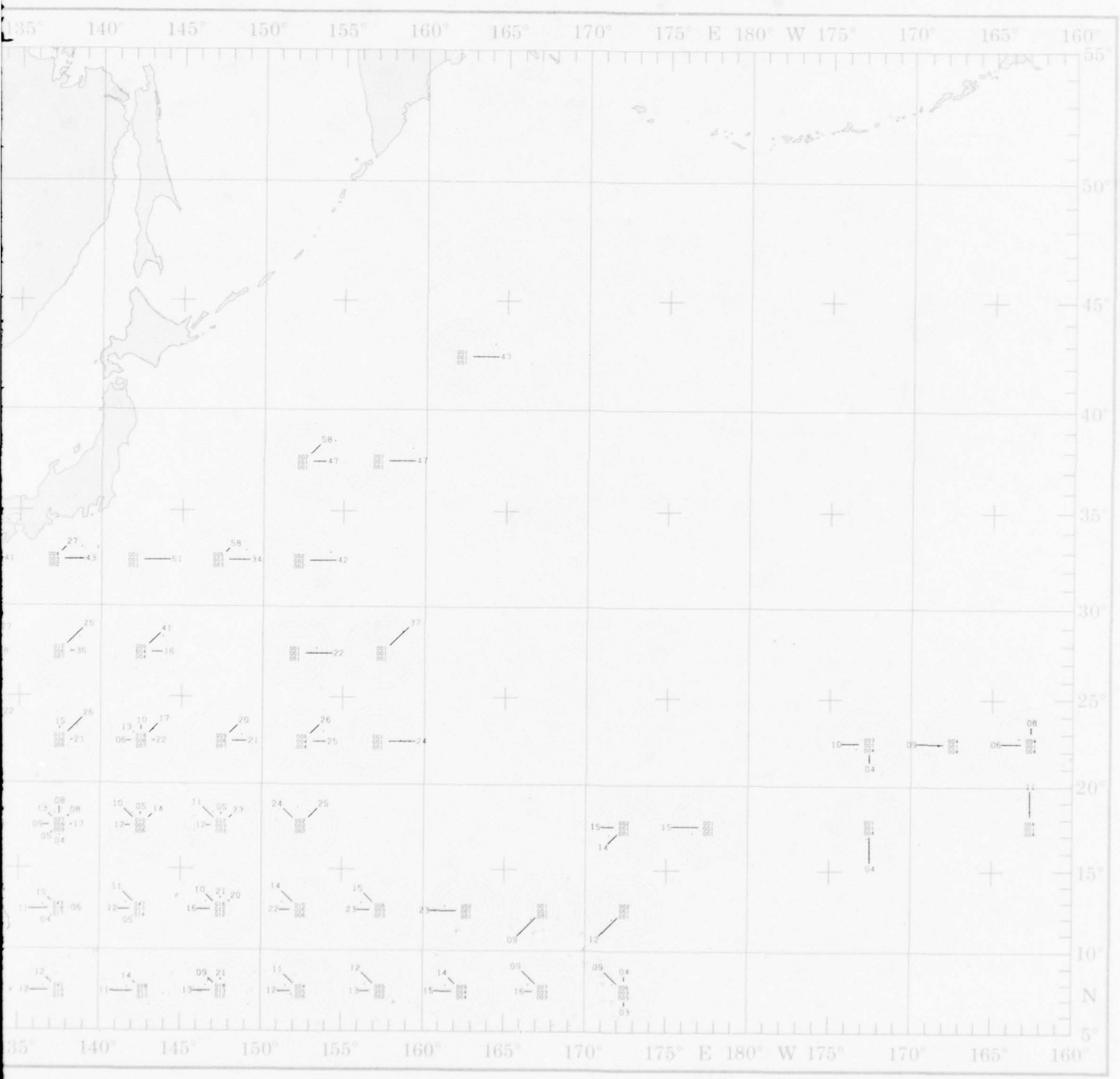



170° E 180° W 170° 160° 150° 140° 130° 120° 110° 100° 90°
70°
60°
50°
40°
30°
20°
10°
N
0°
35
00
01
30
ACK LIMIT
20
15
10
88 98 82
.04 .04 .04
99 99 98 99
.01 .01 .04 .04
00 98 98
01 .01 .01
37 96 85
04 .03 .03
99
.01

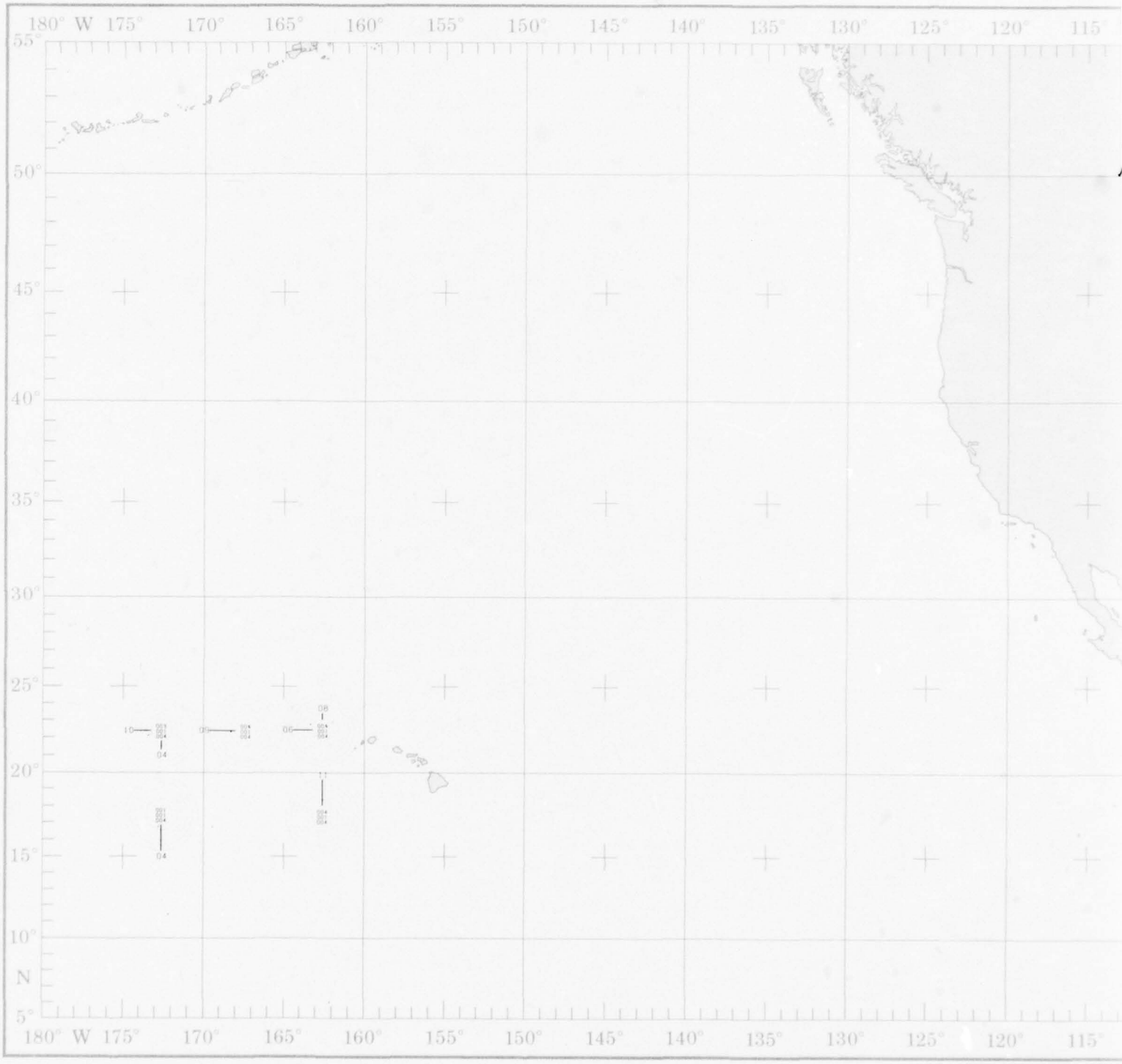
DECEMBER


100°
105°
110°
115°
120°
125°
130°
135°
140°
145°
150°
155°
160°
165°
55°
50°
45°
40°
35°
30°
25°
20°
15°
10°
N
5°

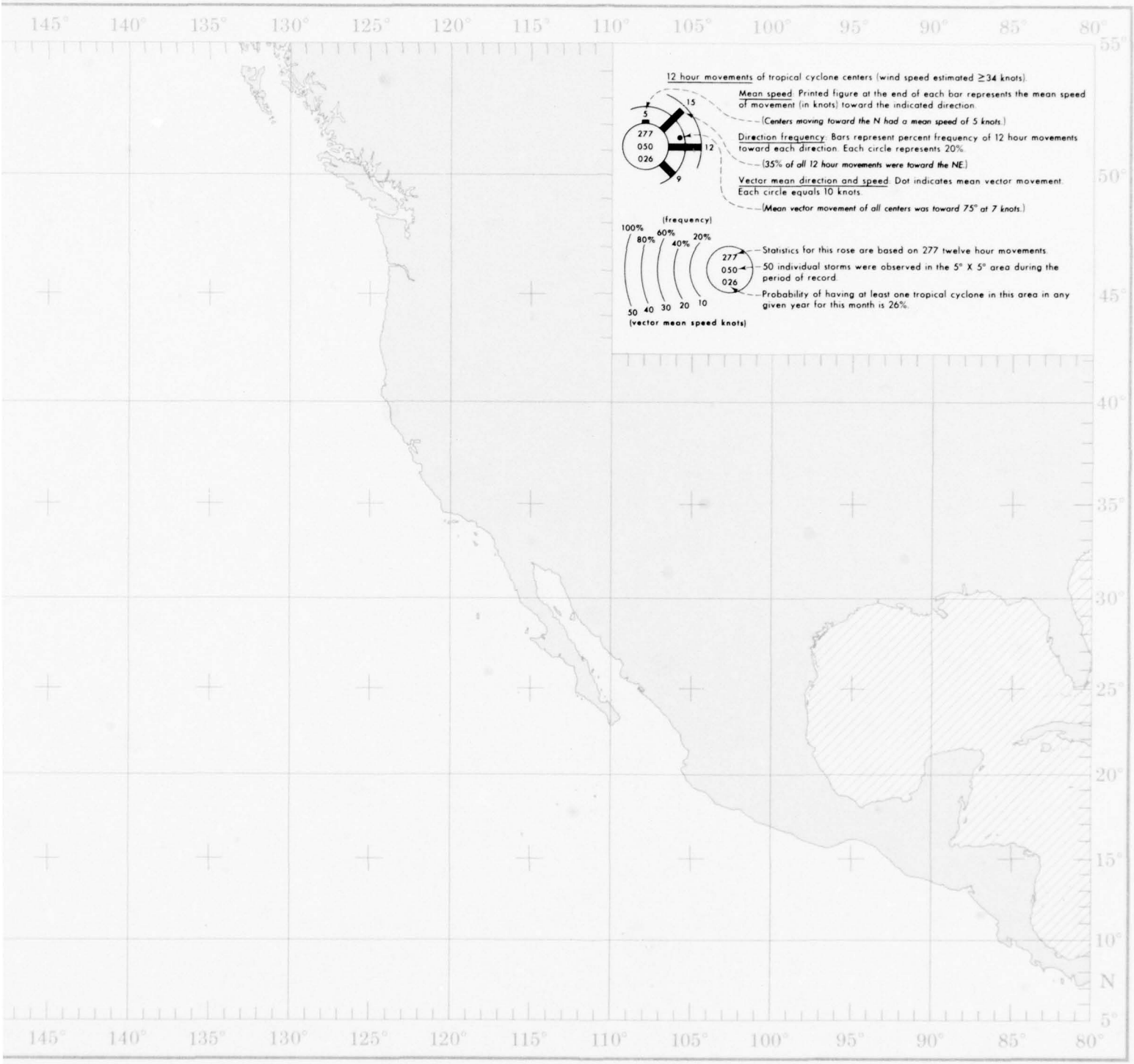
TROPICAL CYCLONE



TROPICAL CYCLONE

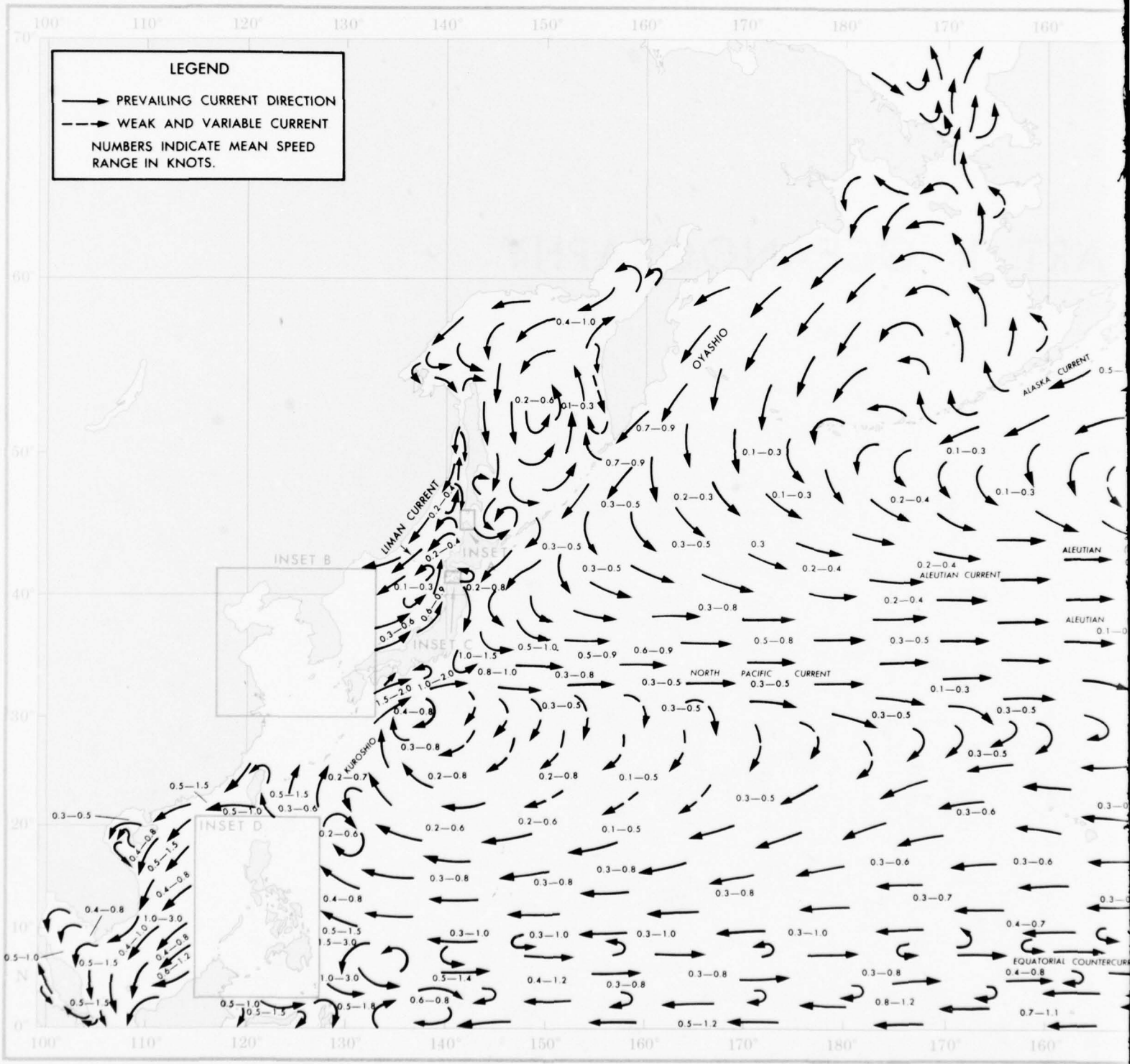


DECEMBER


145° 140° 135° 130° 125° 120° 115° 110° 105° 100° 95° 90° 85° 80°
55° 50° 45° 40° 35° 30° 25° 20° 15° 10° N 5°
12 hour movements of tropical cyclone centers (wind speed estimated ≥34 knots).
Mean speed: Printed figure at the end of each bar represents the mean speed of movement (in knots) toward the indicated direction.
(Centers moving toward the N had a mean speed of 5 knots.)
Direction frequency: Bars represent percent frequency of 12 hour movements toward each direction. Each circle represents 20%.
(35% of all 12 hour movements were toward the NE.)
Vector mean direction and speed: Dot indicates mean vector movement. Each circle equals 10 knots.
(Mean vector movement of all centers was toward 75° at 7 knots.)
5
15
277
050
026
12
9
(frequency)
100%
80%
60%
40%
20%
50 40 30 20 10
(vector mean speed knots)
277
050
026
Statistics for this rose are based on 277 twelve hour movements.
50 individual storms were observed in the 5° X 5° area during the period of record.
Probability of having at least one tropical cyclone in this area in any given year for this month is 26%.

PART II OCEANOGRAPHY

FIG. 1 SURFACE CURRENTS



WINTER

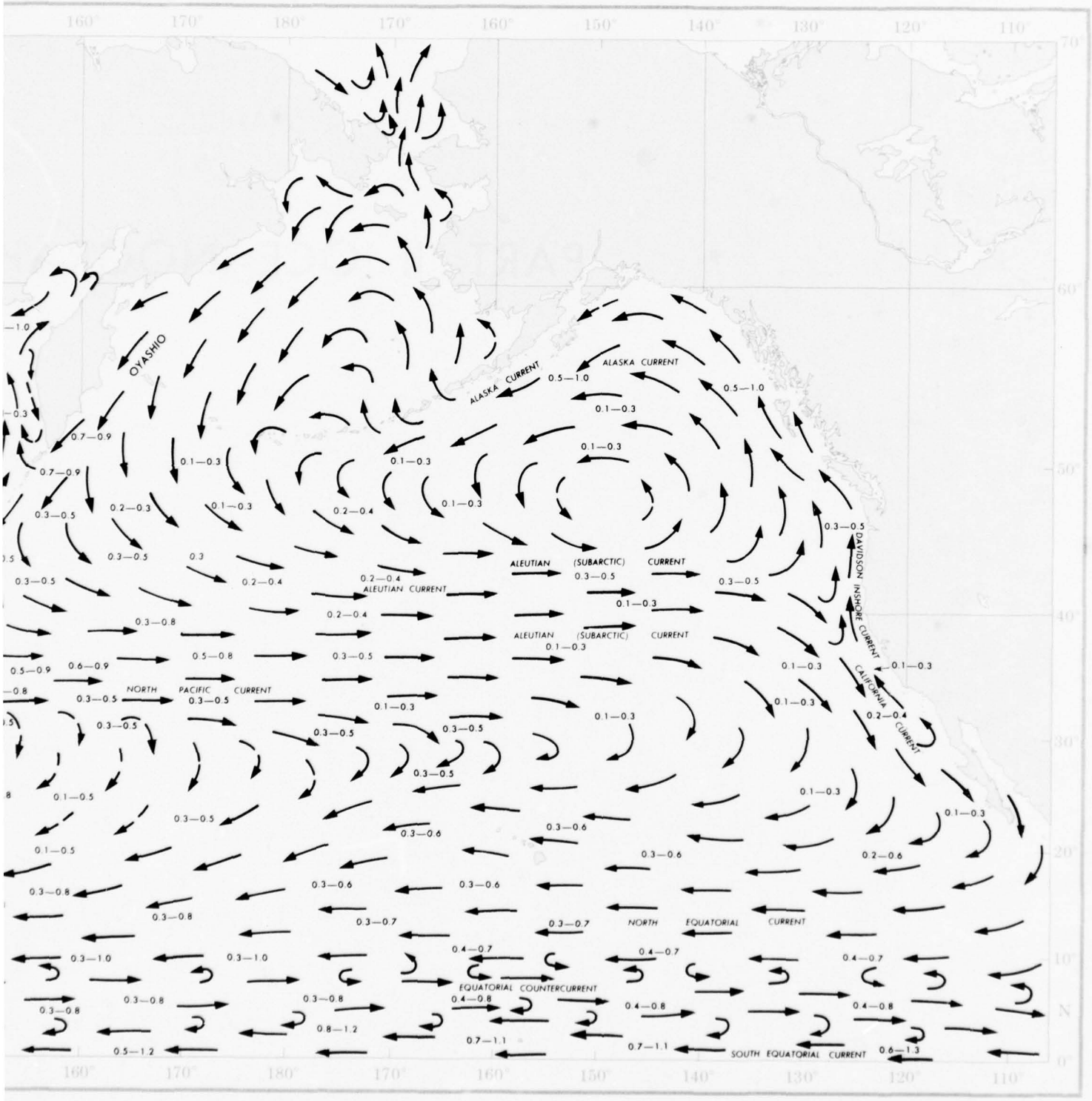
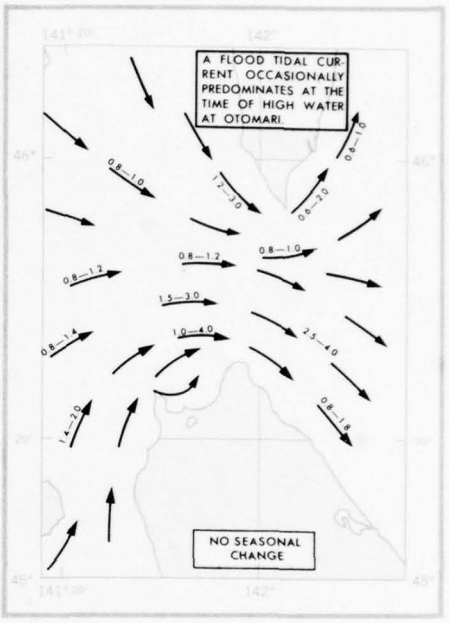

OYASHIO
ALASKA CURRENT
ALASKA CURRENT
ALEUTIAN (SUBARCTIC) CURRENT
ALEUTIAN CURRENT
ALEUTIAN (SUBARCTIC) CURRENT
NORTH PACIFIC CURRENT
DAVIDSON INSHORE CURRENT
CALIFORNIA CURRENT
NORTH EQUATORIAL CURRENT
EQUATORIAL COUNTERCURRENT
SOUTH EQUATORIAL CURRENT
160° 170° 180° 170° 160° 150° 140° 130° 120° 110°
70° 60° 50° 40° 30° 20° 10° 0° N

FIG. 2 SURFACE CURRENTS (INSETS)

INSET A

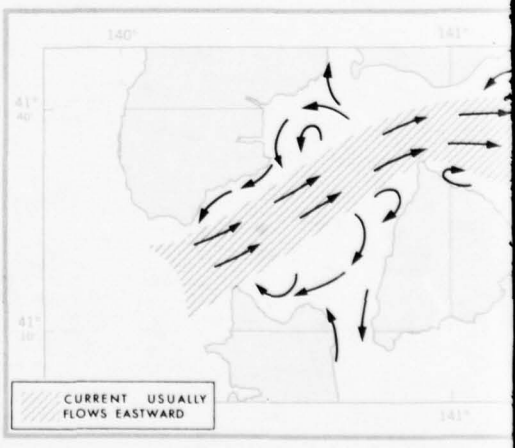


LEGEND

PREVAILING CURRENT DIRECTION

WEAK AND VARIABLE CURRENT

NUMBERS INDICATE MEAN SPEED RANGE IN KNOTS.

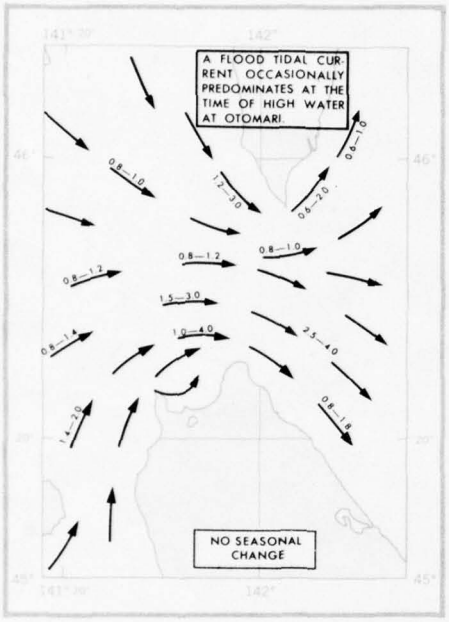


INSET C

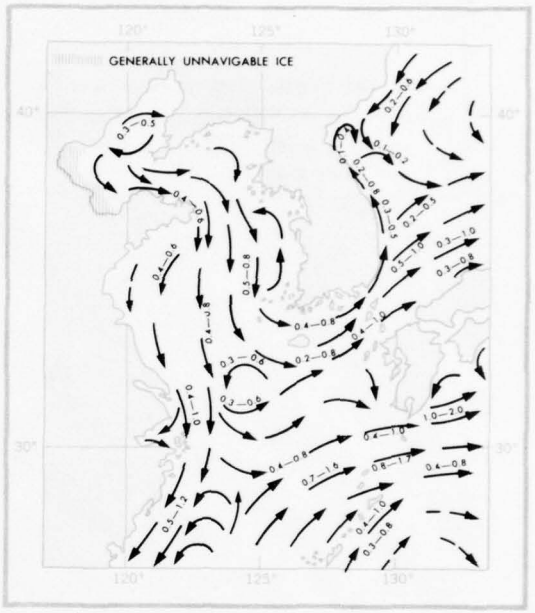
TS (INSETS)

WINTER

INSET A



INSET B

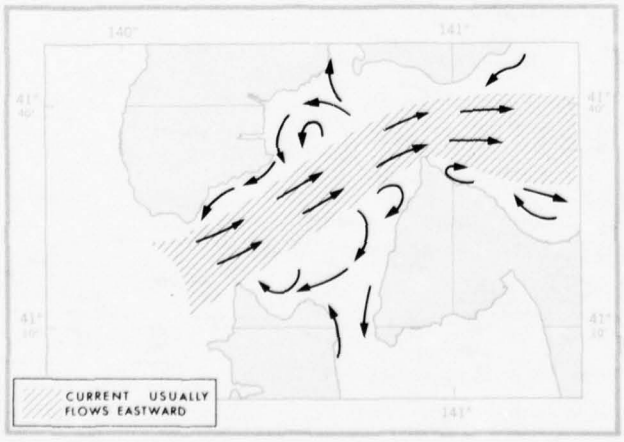


LEGEND

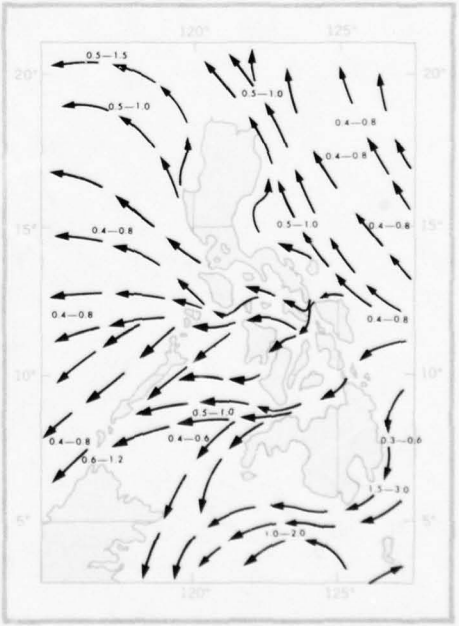
PREVAILING CURRENT DIRECTION

WEAK AND VARIABLE CURRENT

NUMBERS INDICATE MEAN SPEED RANGE IN KNOTS.

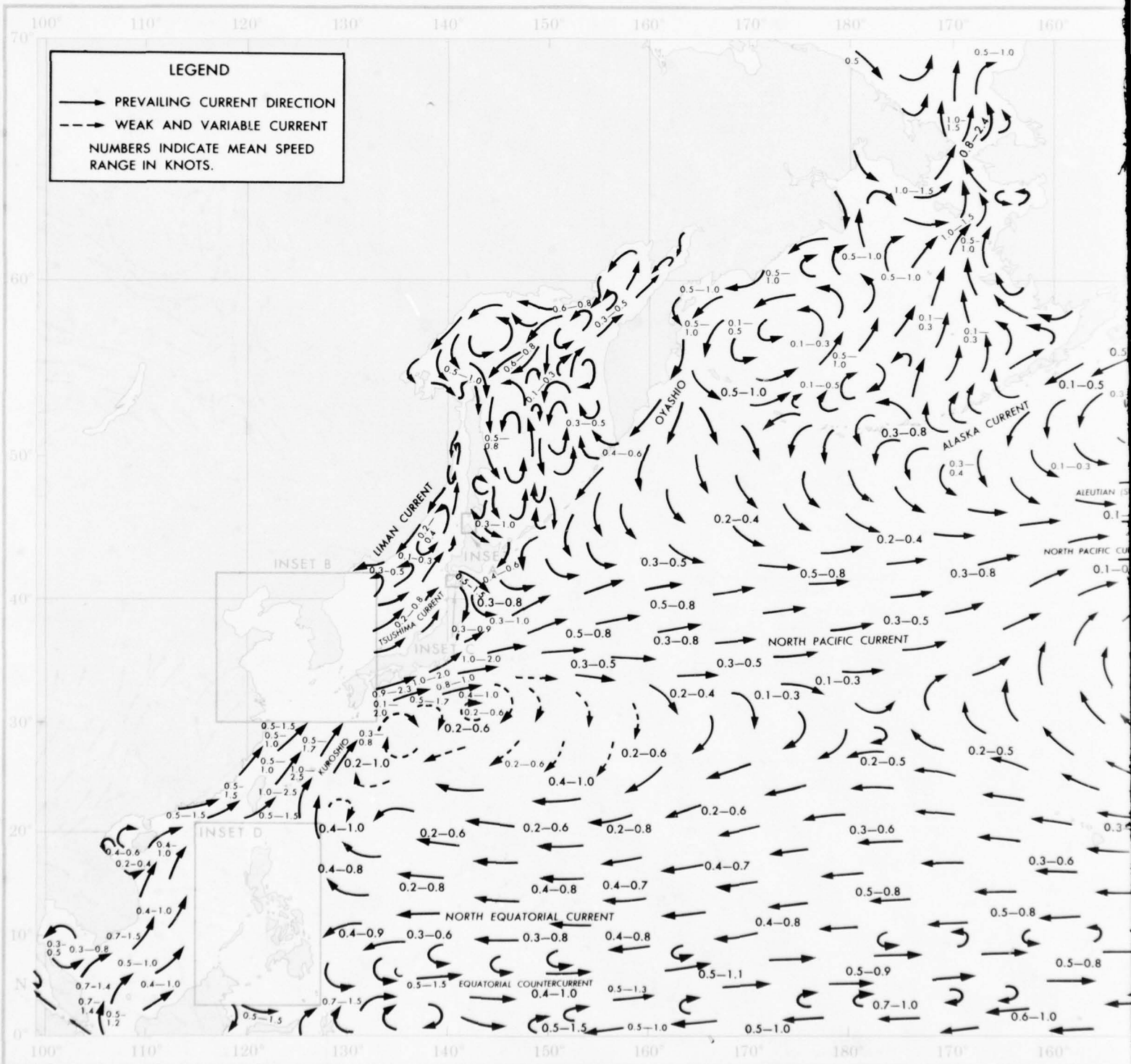


INSET C



INSET D

FIG. 3 SURFACE CURRENTS



TS

SUMMER

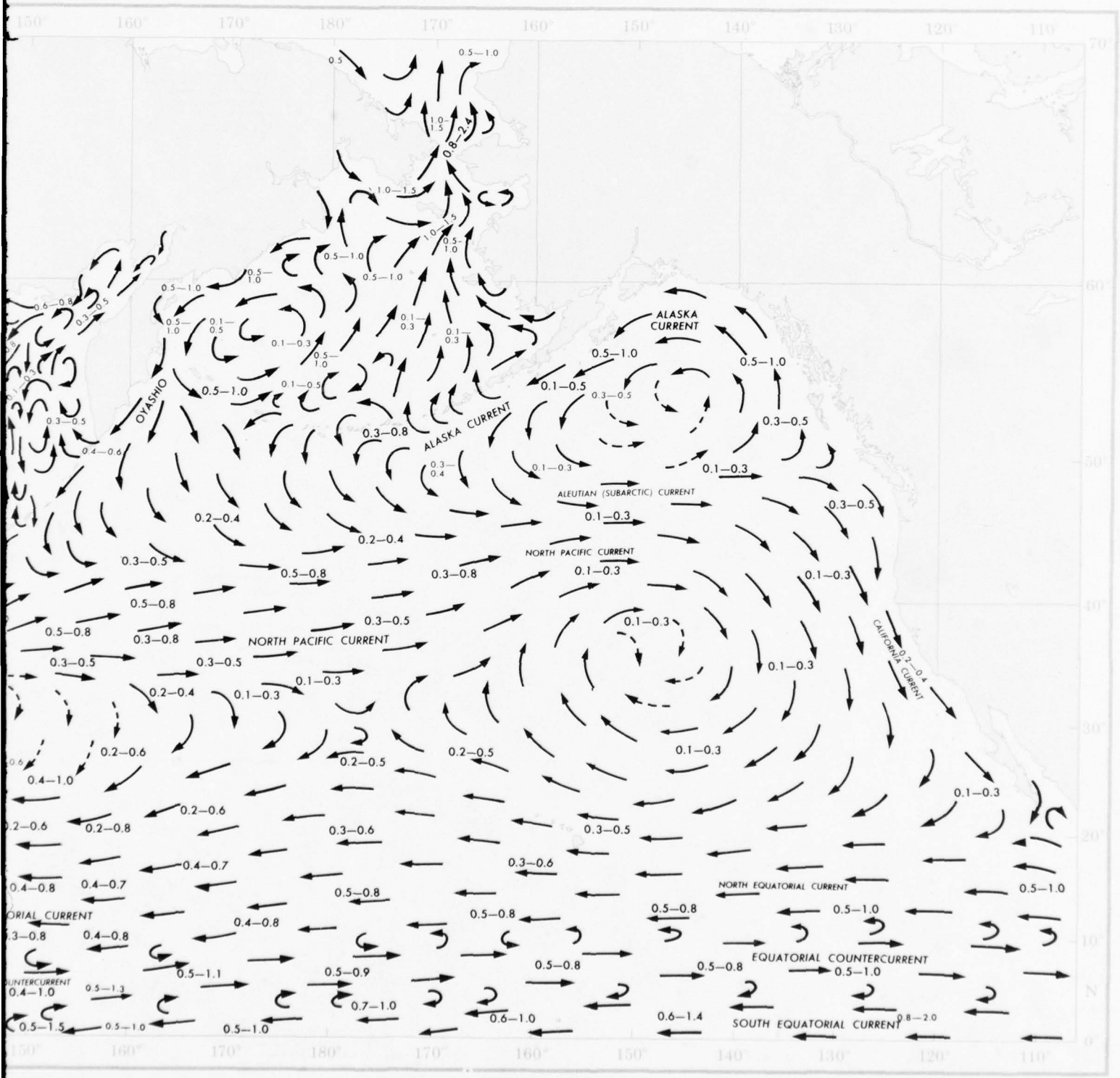
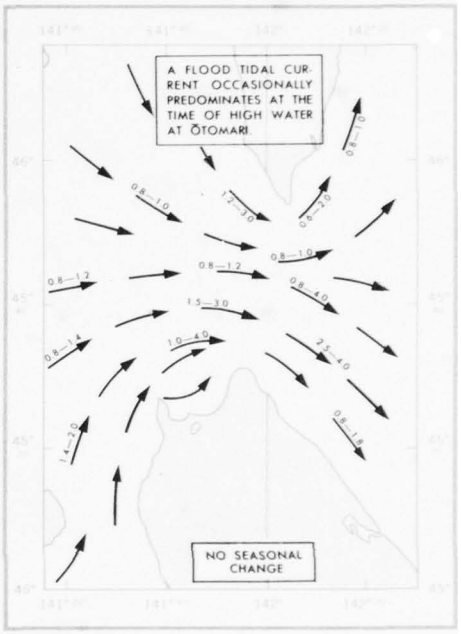

ALASKA CURRENT
OYASHIO
ALASKA CURRENT
ALEUTIAN (SUBARCTIC) CURRENT
NORTH PACIFIC CURRENT
NORTH PACIFIC CURRENT
CALIFORNIA CURRENT
NORTH EQUATORIAL CURRENT
EQUATORIAL COUNTERCURRENT
SOUTH EQUATORIAL CURRENT

FIG. 4 SURFACE CURRENTS (INSETS)

INSET A

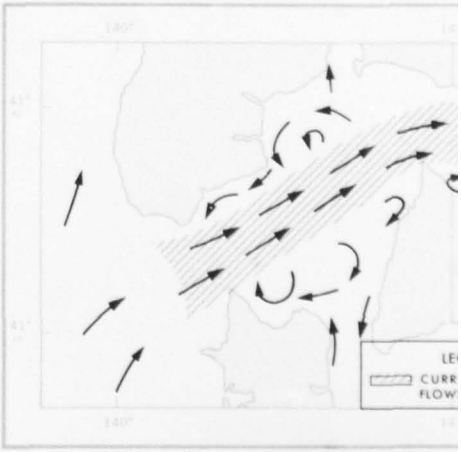


LEGEND

PREVAILING CURRENT DIRECTION

WEAK AND VARIABLE CURRENT

NUMBERS INDICATE MEAN SPEED RANGE IN KNOTS.

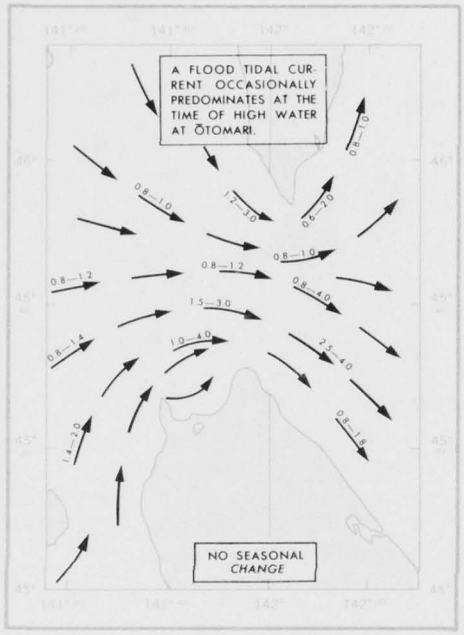


INSET C

TS (INSETS)

SUMM

INSET A



INSET B

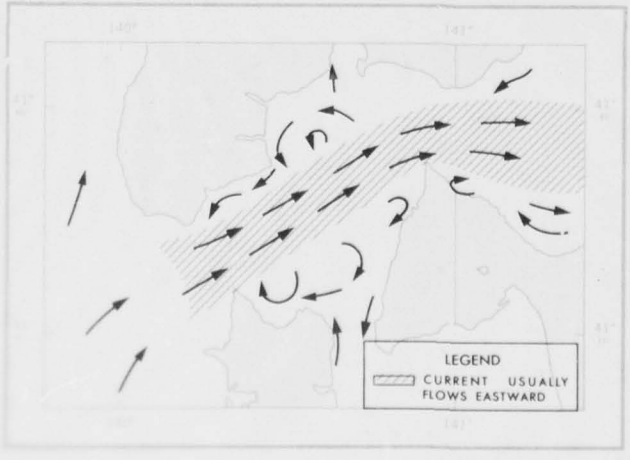


LEGEND

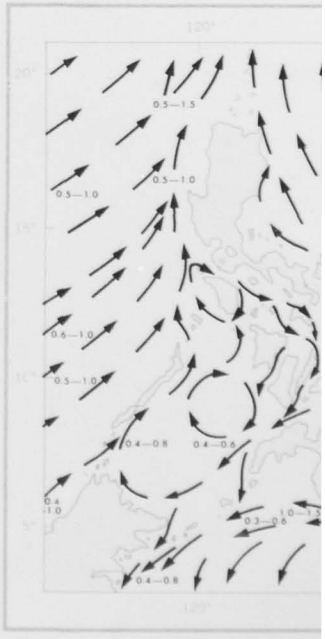
PREVAILING CURRENT DIRECTION

WEAK AND VARIABLE CURRENT

NUMBERS INDICATE MEAN SPEED RANGE IN KNOTS.



INSET C



INSET D

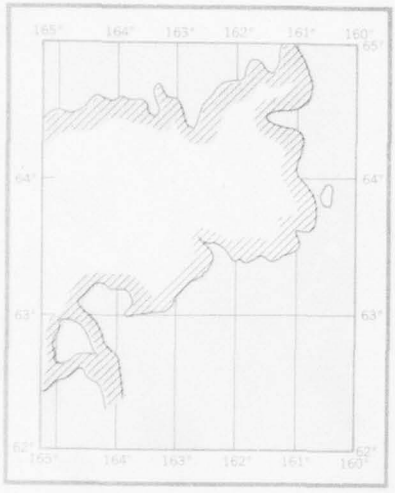
FIG. 5 TYPE OF TIDES




150°
160°
170°
180°
170°
160°
150°
140°
130°
120°
110°
70°
60°
50°
40°
30°
20°
10°
0°
N
INSET A
INSET B
INSET D

FIG. 6 TYPE OF TIDES (INSETS)

INSET A



INSET B



LEGEND

DIURNAL TIDE

SEMIDIURNAL TIDE

MIXED TIDE

INSET C





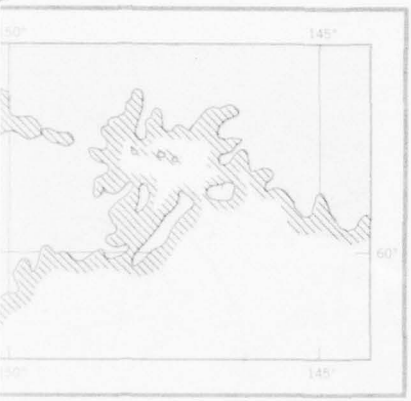
INSET E



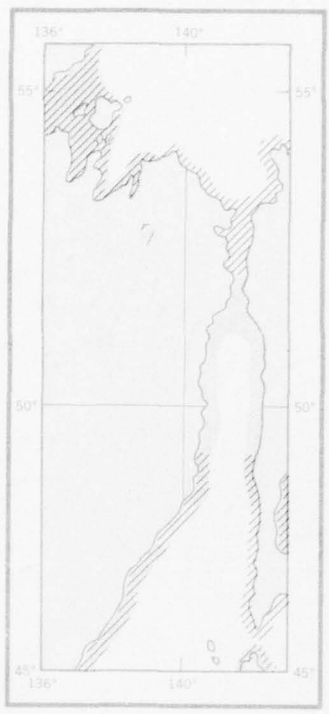
INSET F

SETS)

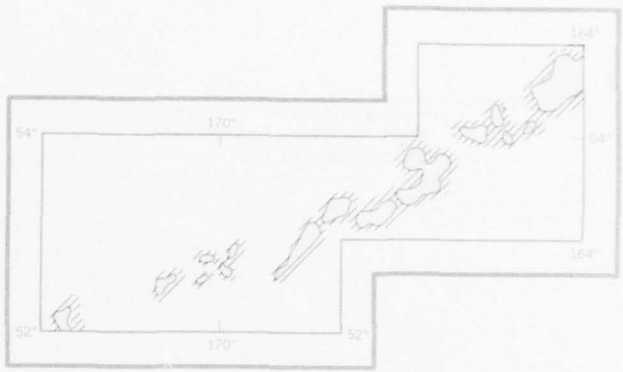
INSET B



INSET C



INSET D



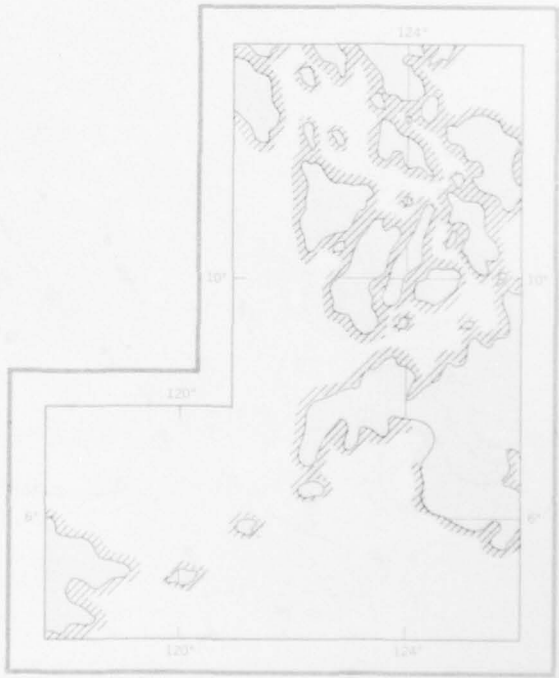
LEGEND

- DIURNAL TIDE
- SEMIDIURNAL TIDE
- MIXED TIDE



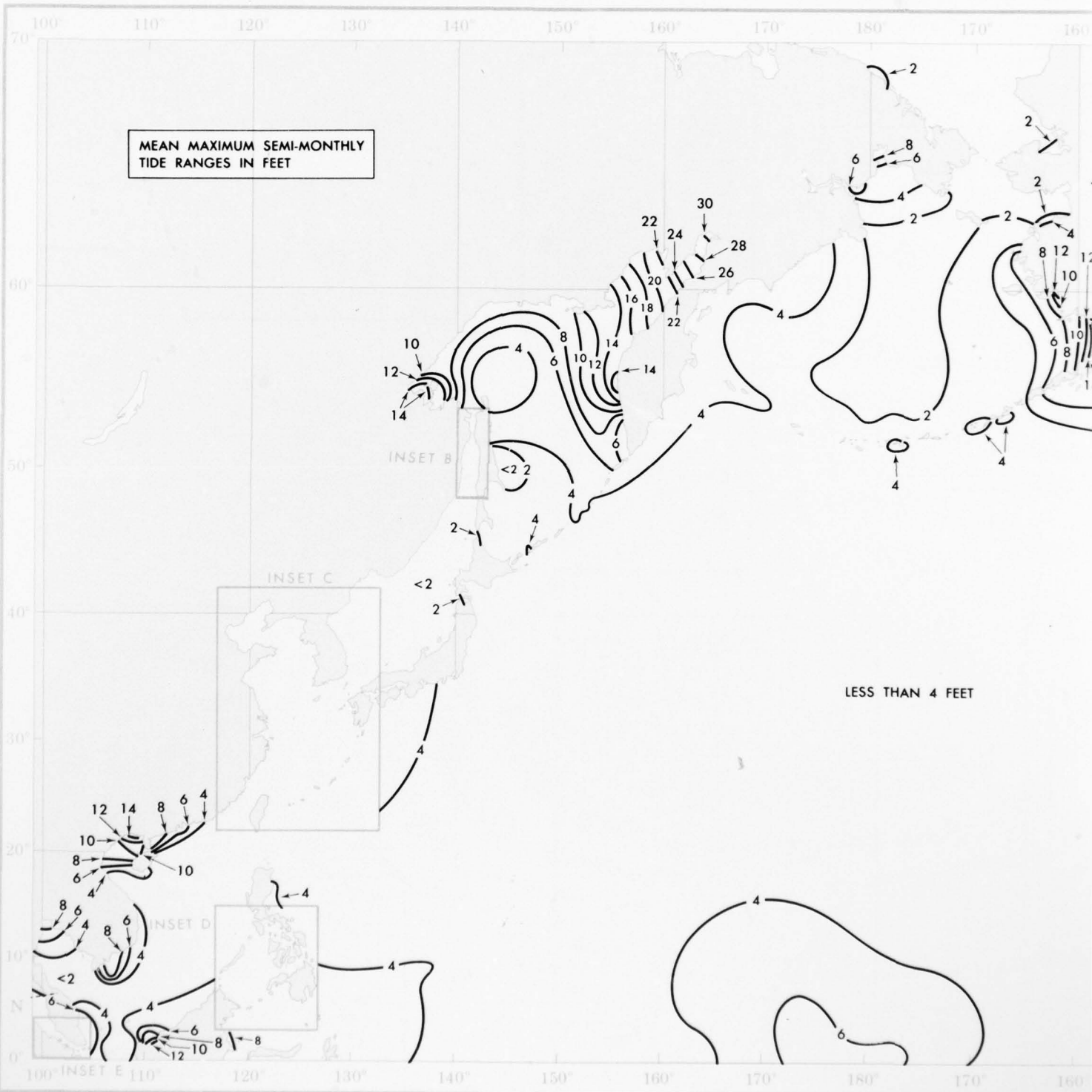


INSET F



INSET G

FIG. 7 CORANGE LINES



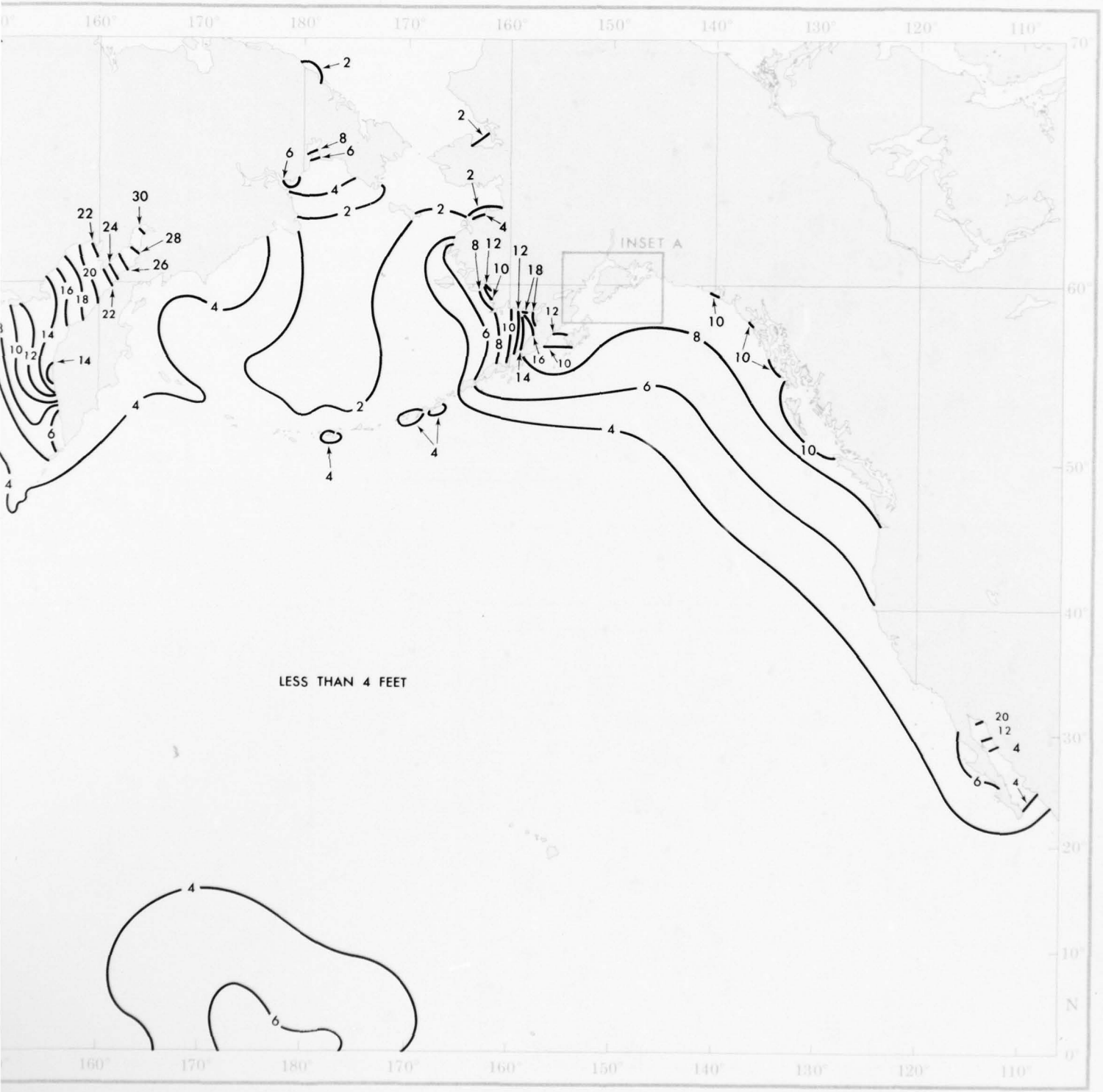
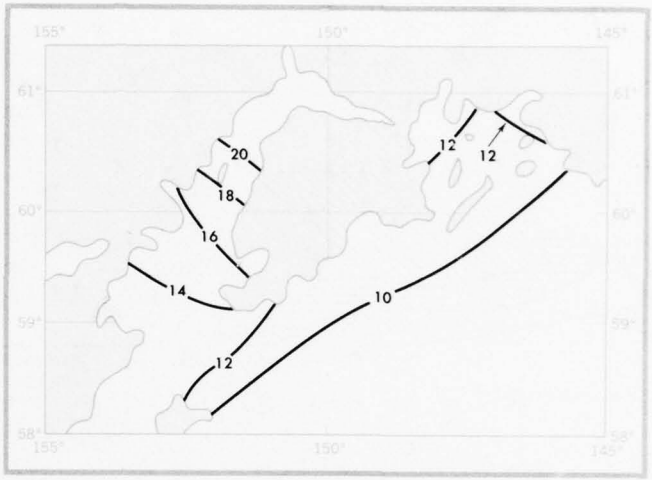
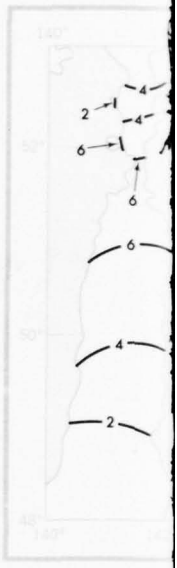

160°
170°
180°
170°
160°
150°
140°
130°
120°
110°
70°
60°
50°
40°
30°
20°
10°
N
0°
INSET A
LESS THAN 4 FEET

FIG. 8 CORANGE LINES (INSETS)

INSET A



INSET B



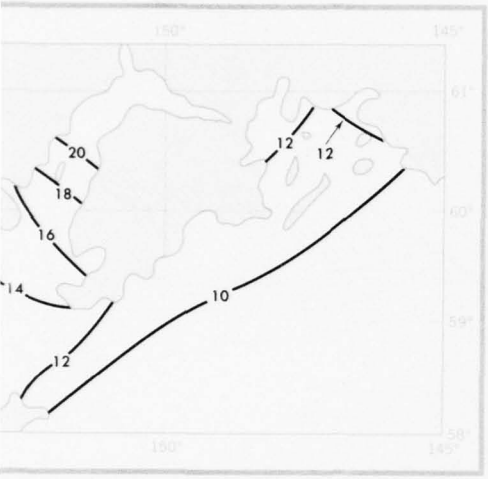


INSET D

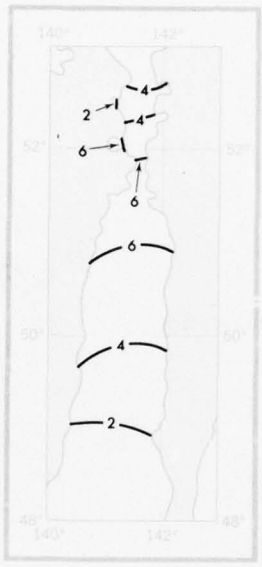
MEAN MAXIM
TIDE RANGES

(INSETS)

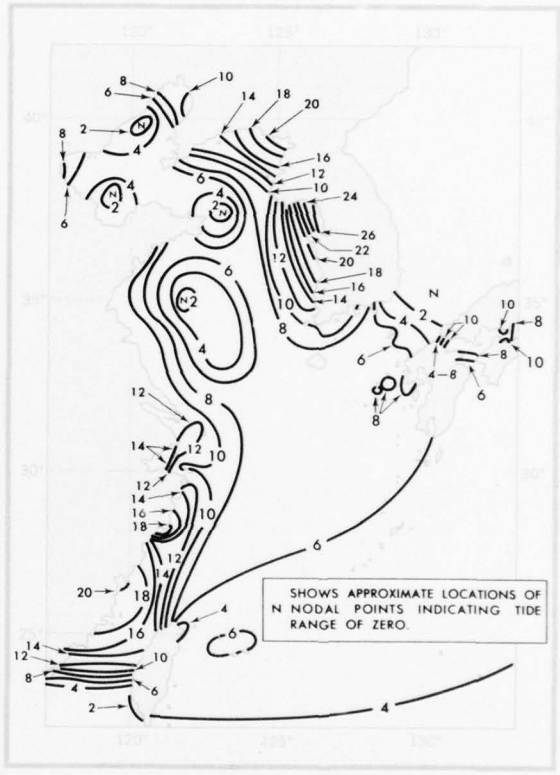
INSET A



INSET B



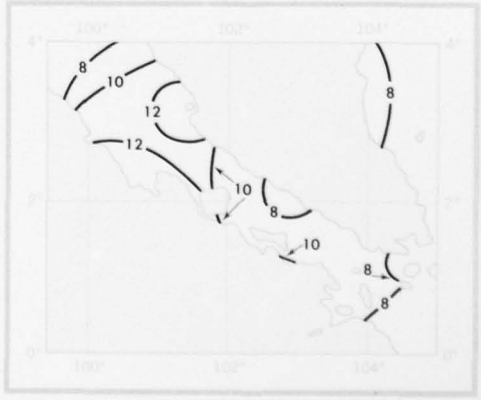
INSET C



MEAN MAXIMUM SEMIMONTHLY TIDE RANGES IN FEET

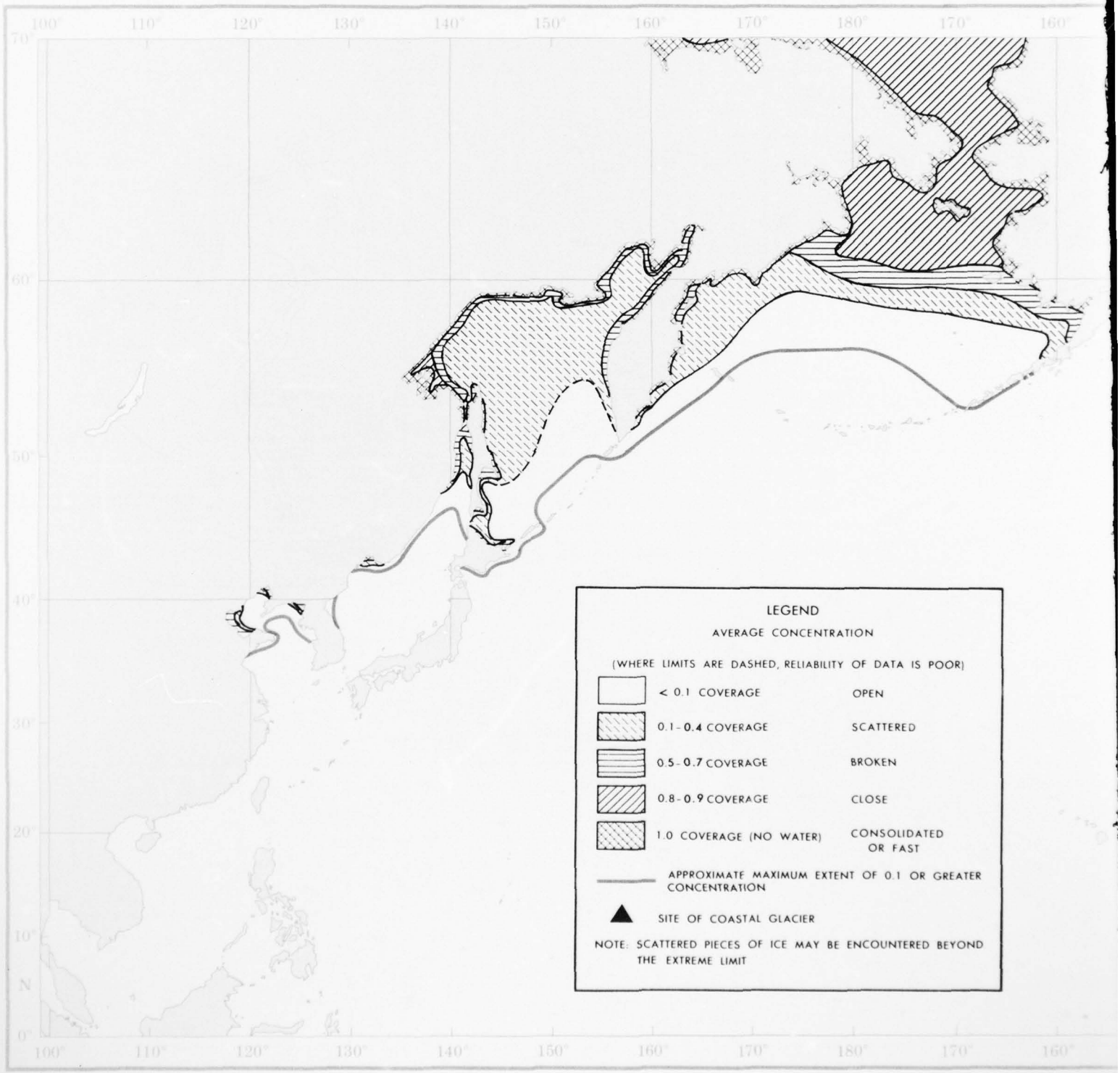


INSET D



INSET E

FIG. 9 ICE CONCENTRATION AND EXTREMES



ION AND EXTREMES

JANUARY

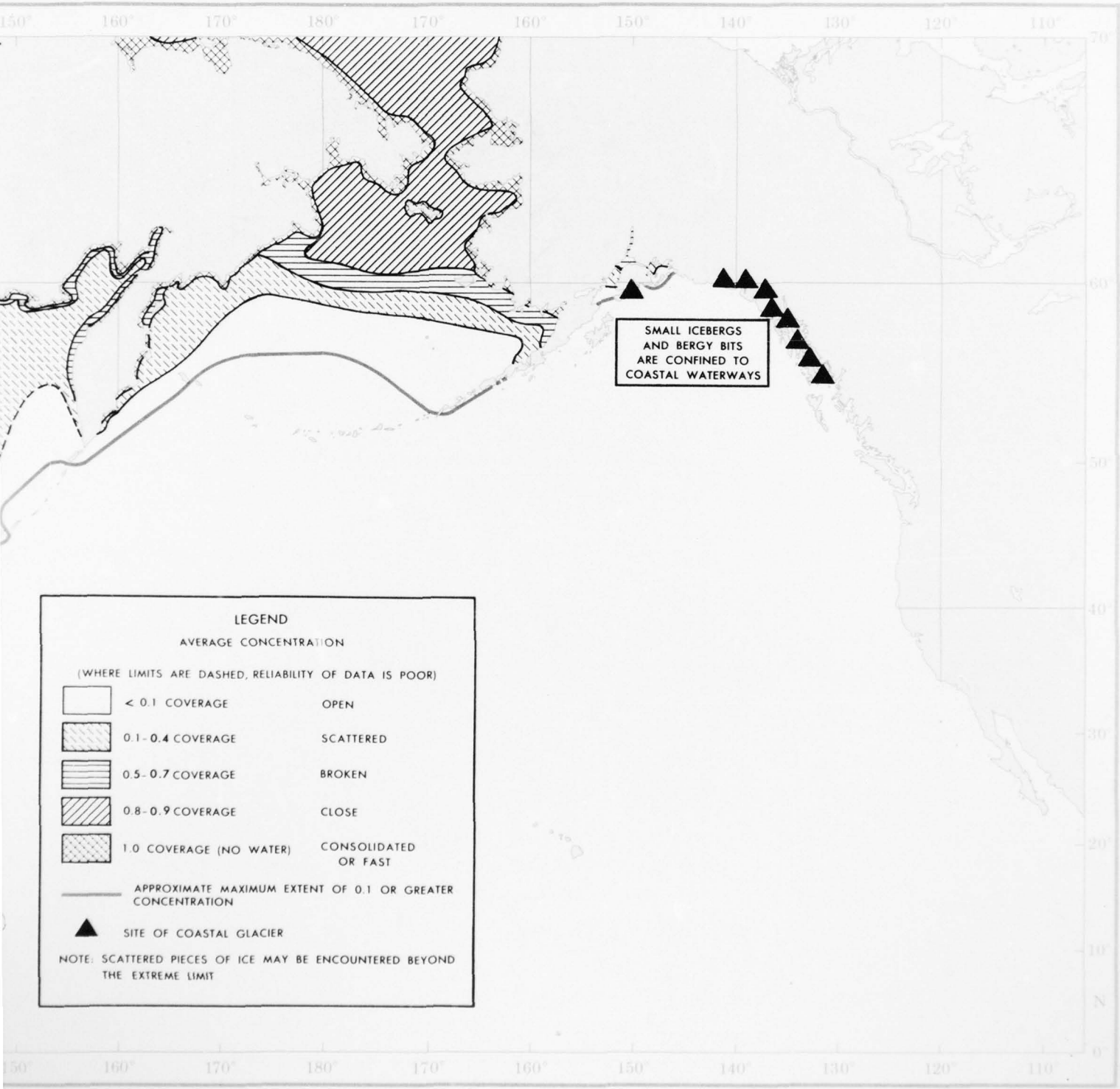
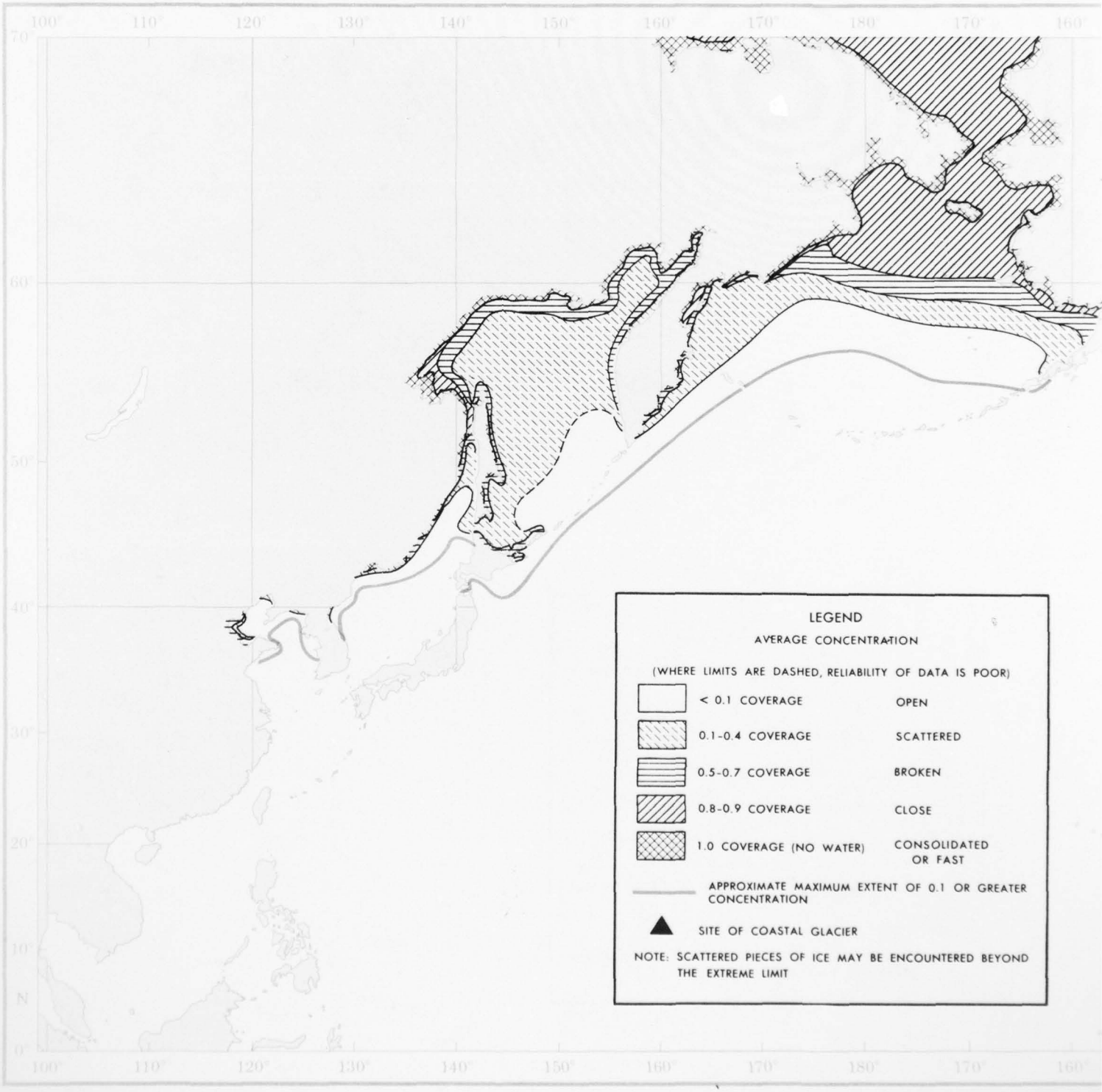
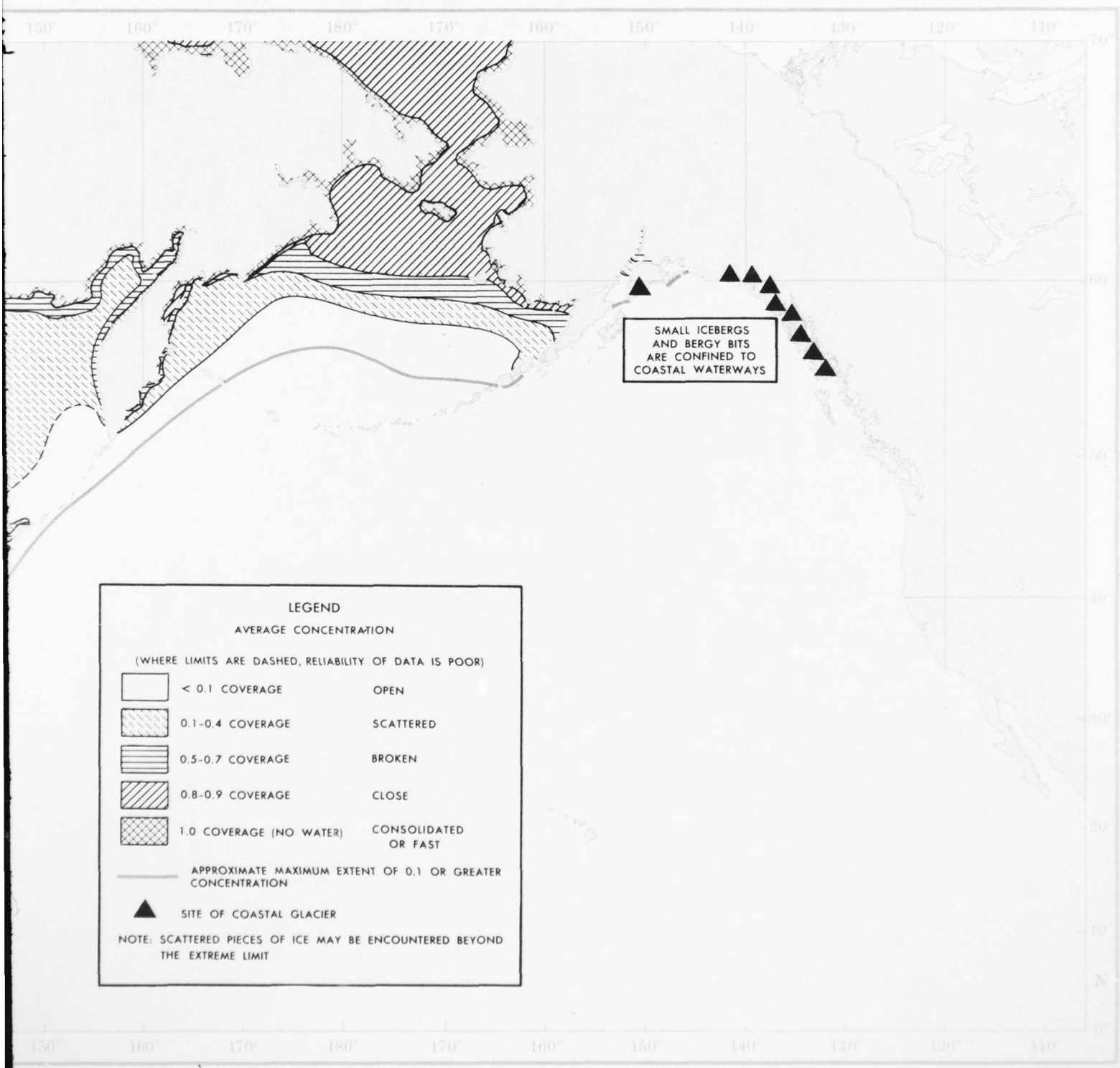


FIG. 10 ICE CONCENTRATION AND EXTREMES



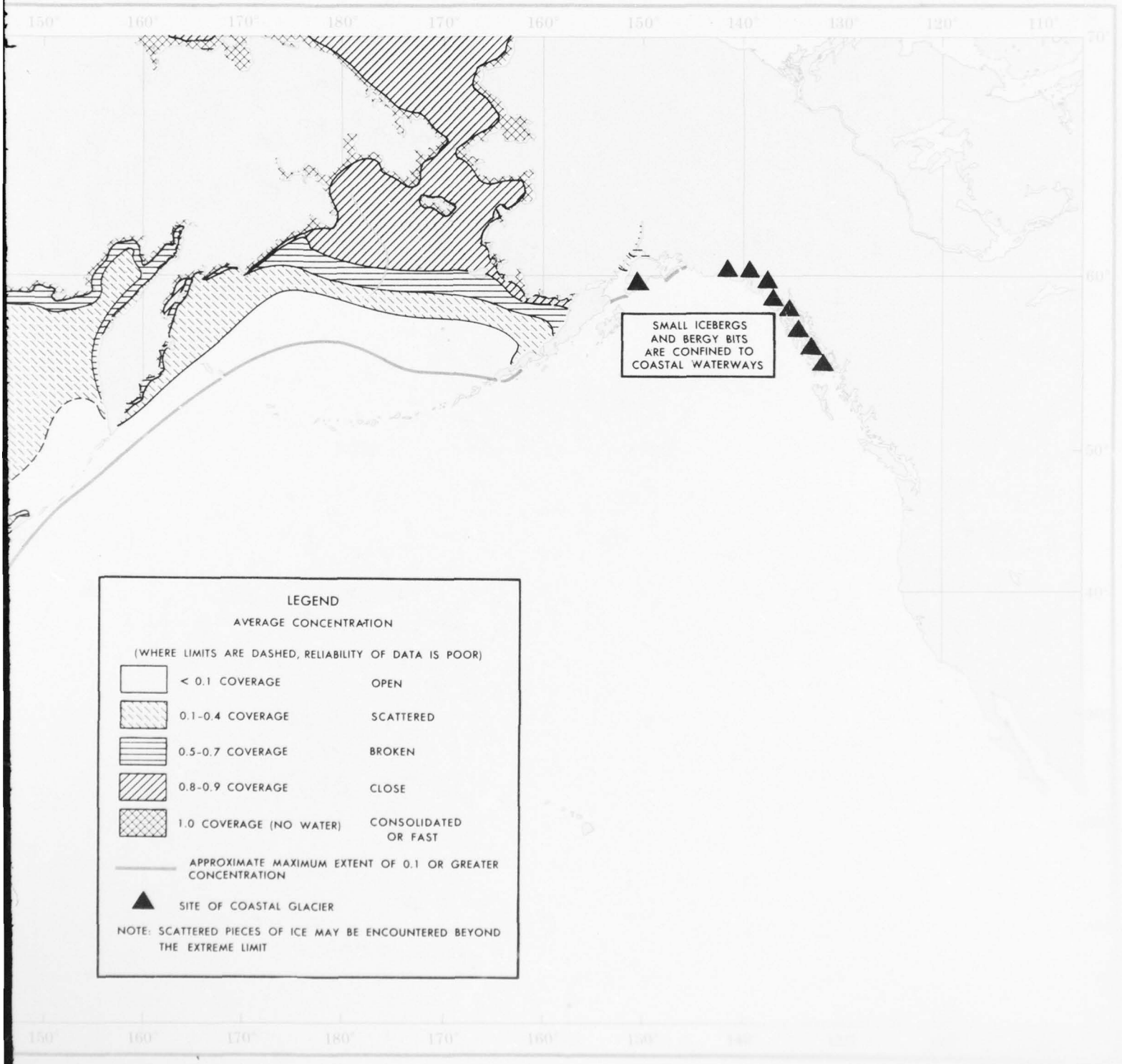
ATION AND EXTREMES

FEBRUARY



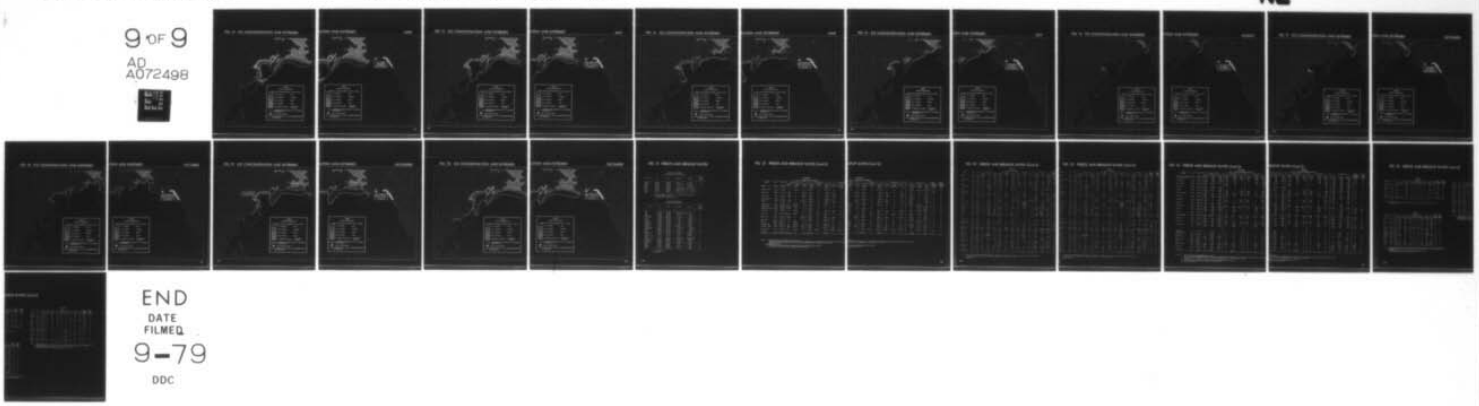
ATION AND EXTREMES

FEBRUARY



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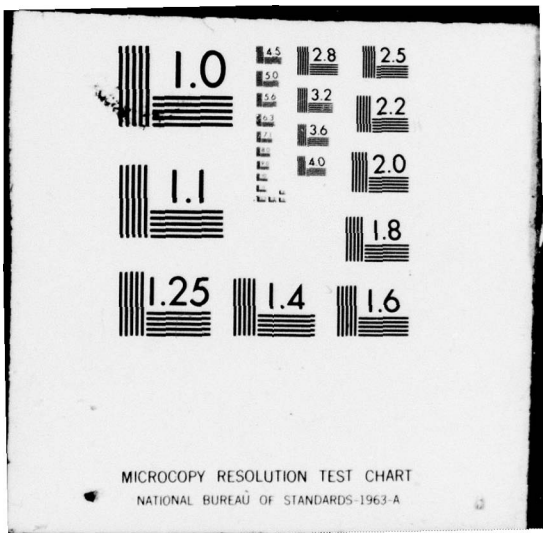
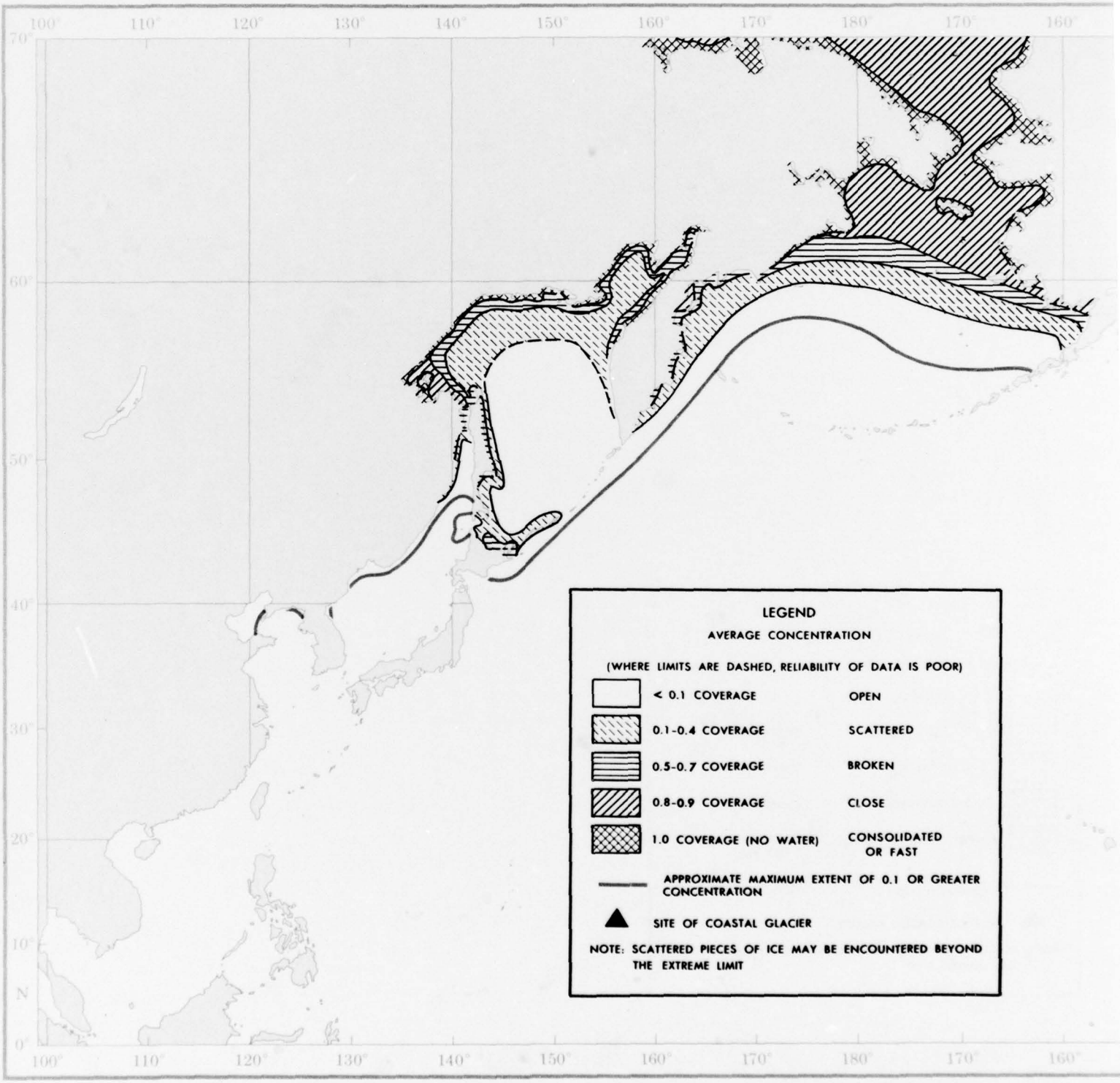

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5.6
6.3
7.1
8.0
9.0
MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

FIG. 12 ICE CONCENTRATION AND EXTREMES



RATION AND EXTREMES

APRIL

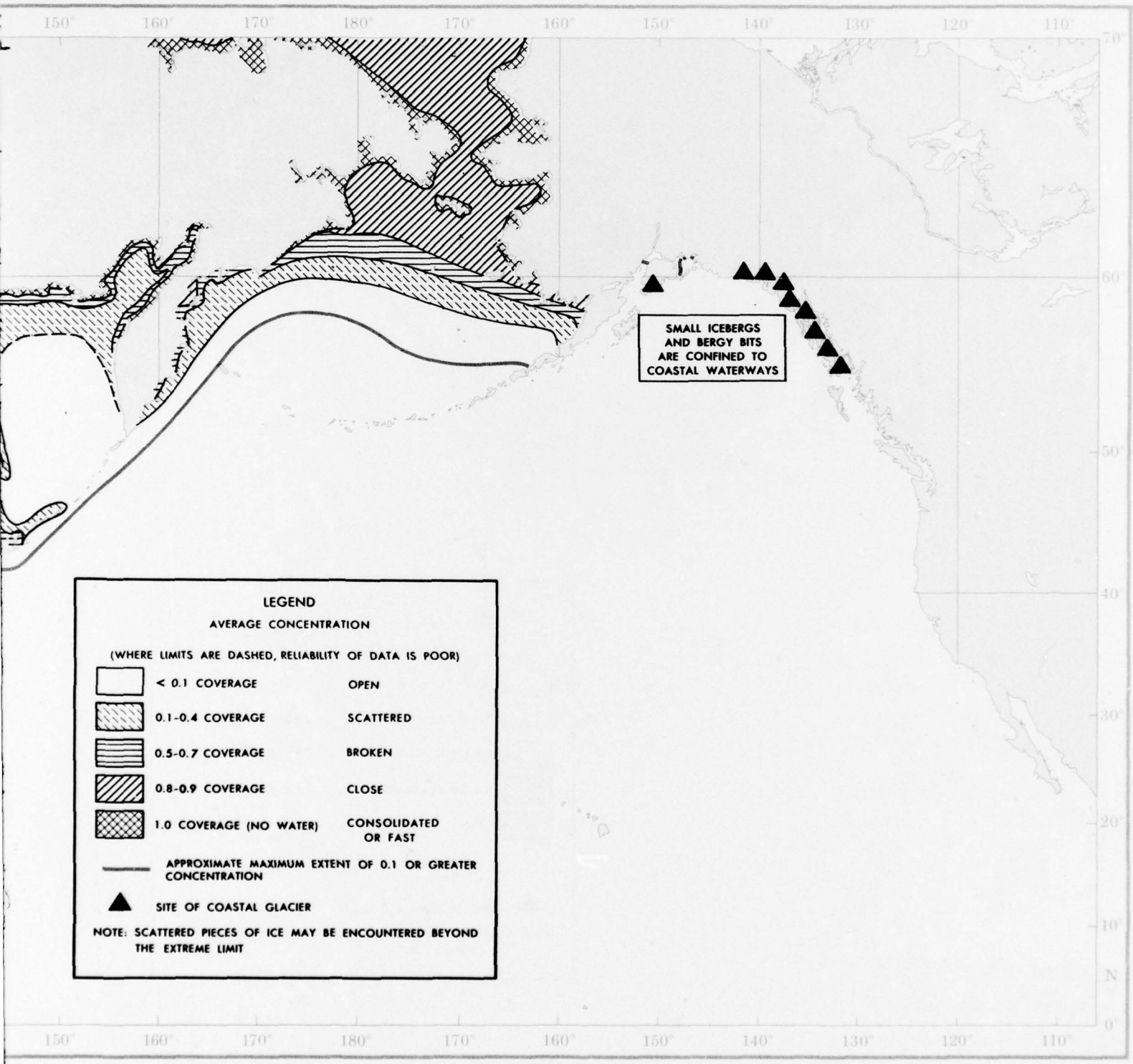
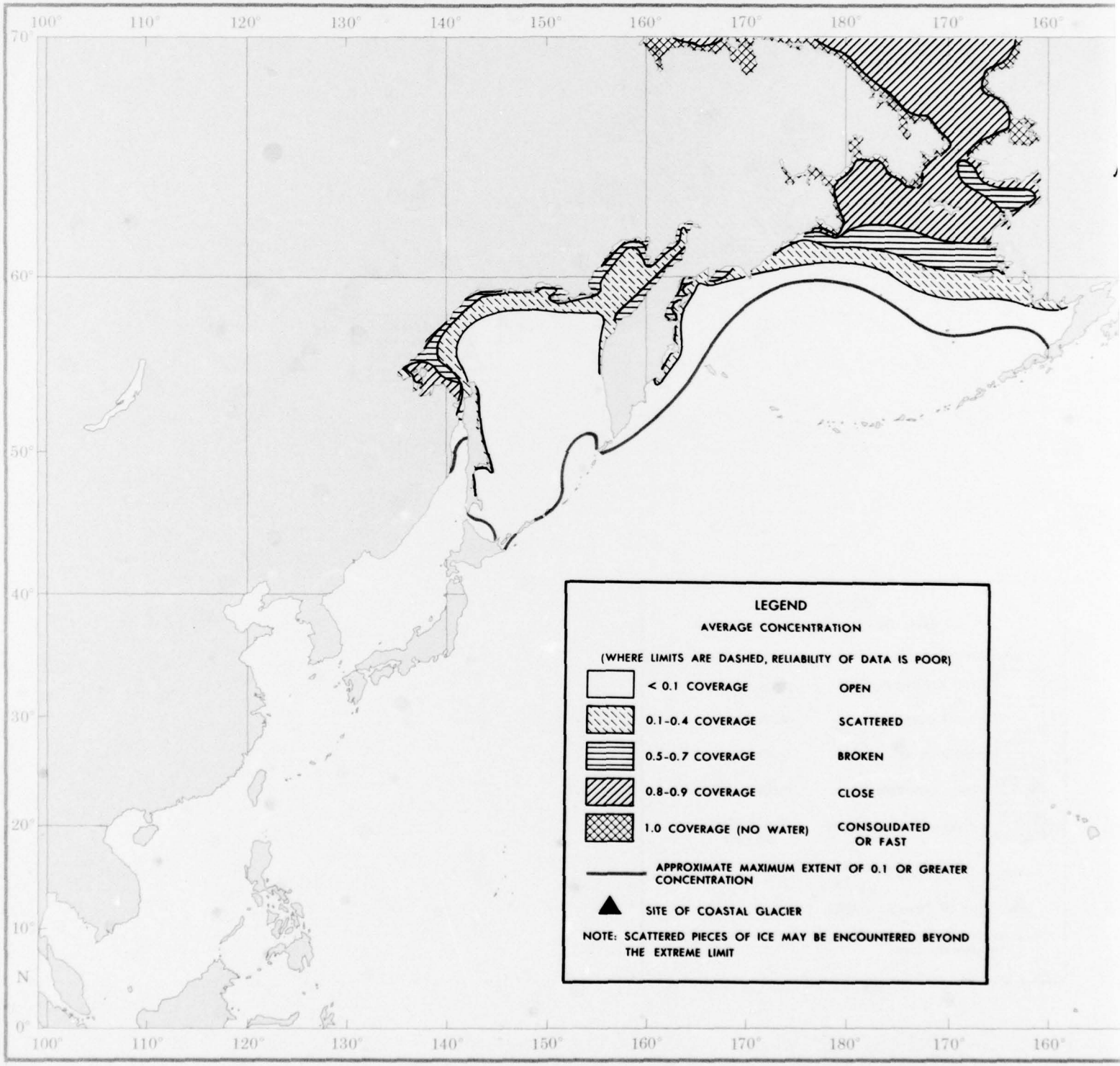


FIG. 13 ICE CONCENTRATION AND EXTREMES



ATION AND EXTREMES

MAY

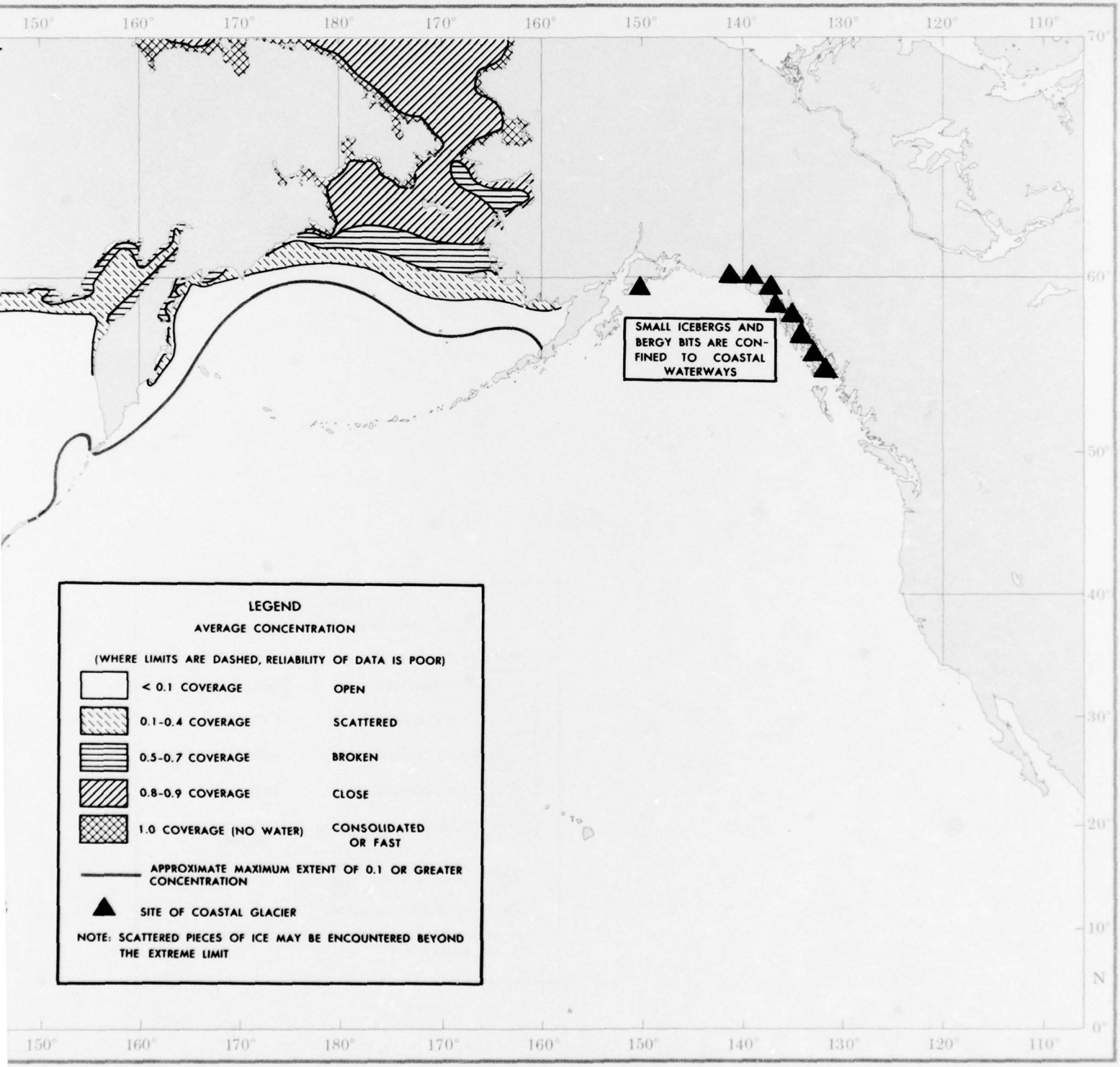
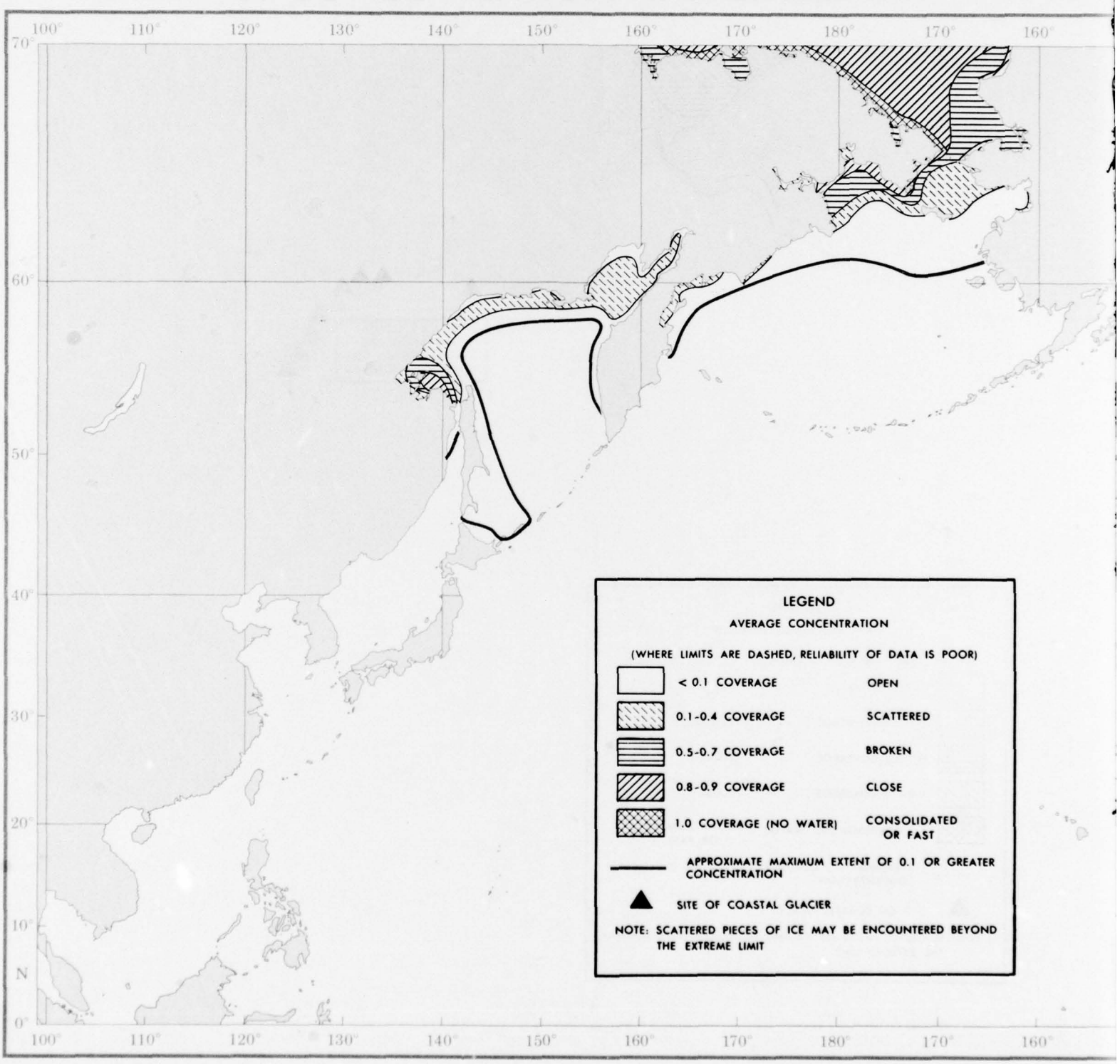


FIG. 14 ICE CONCENTRATION AND EXTREMES



ATION AND EXTREMES

JUNE

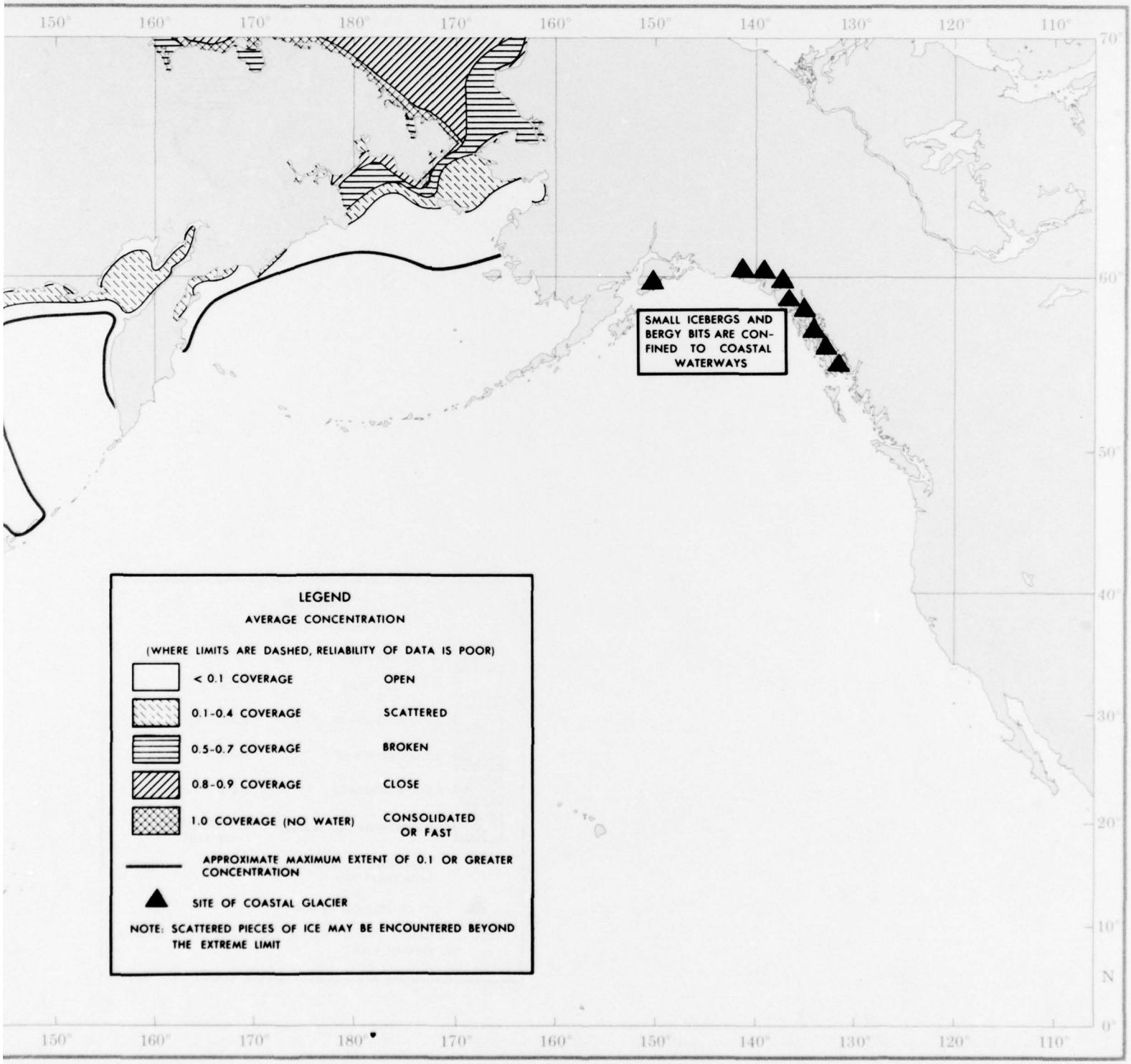
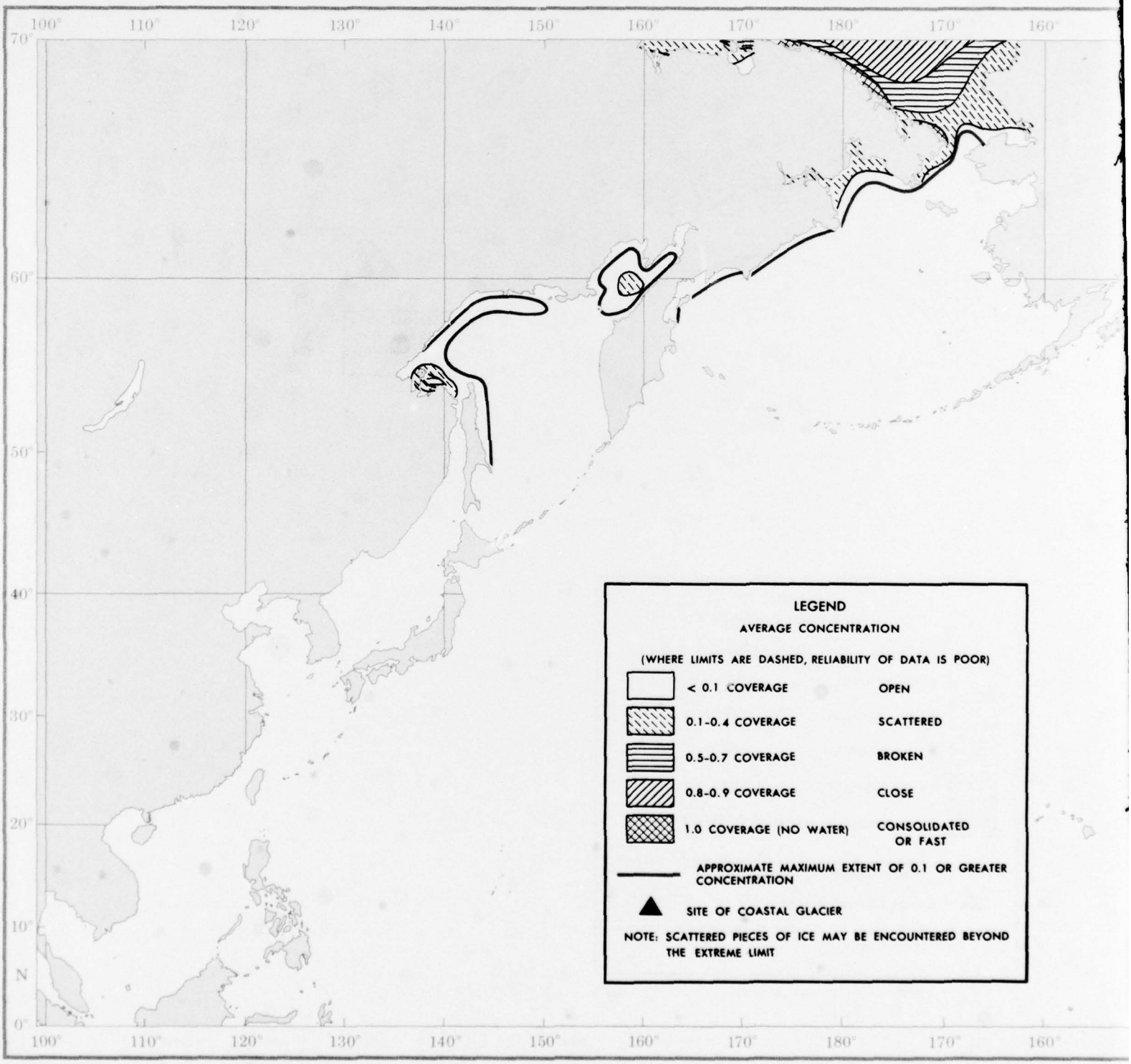


FIG. 15 ICE CONCENTRATION AND EXTREMES



ON AND EXTREMES

JULY

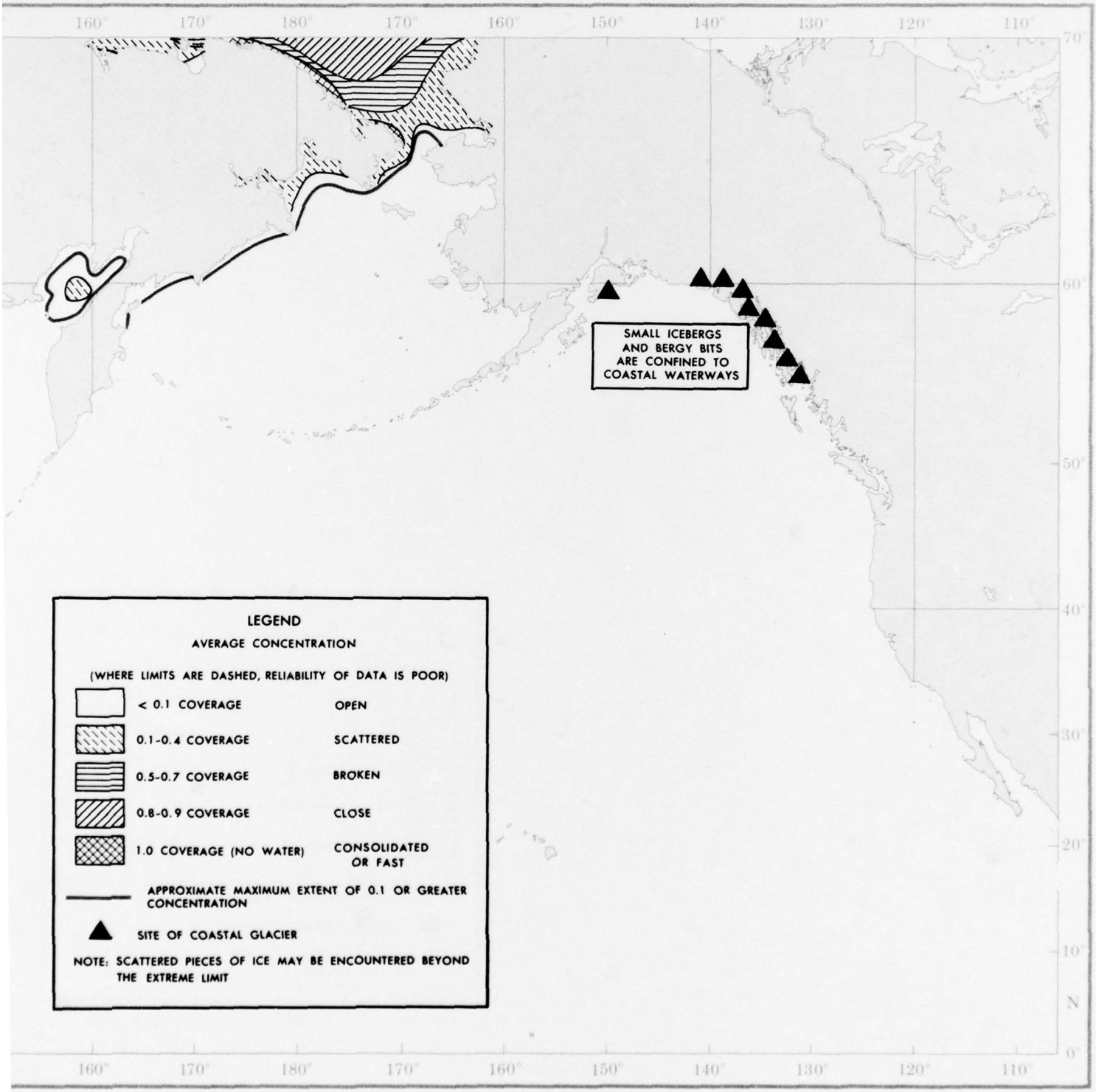
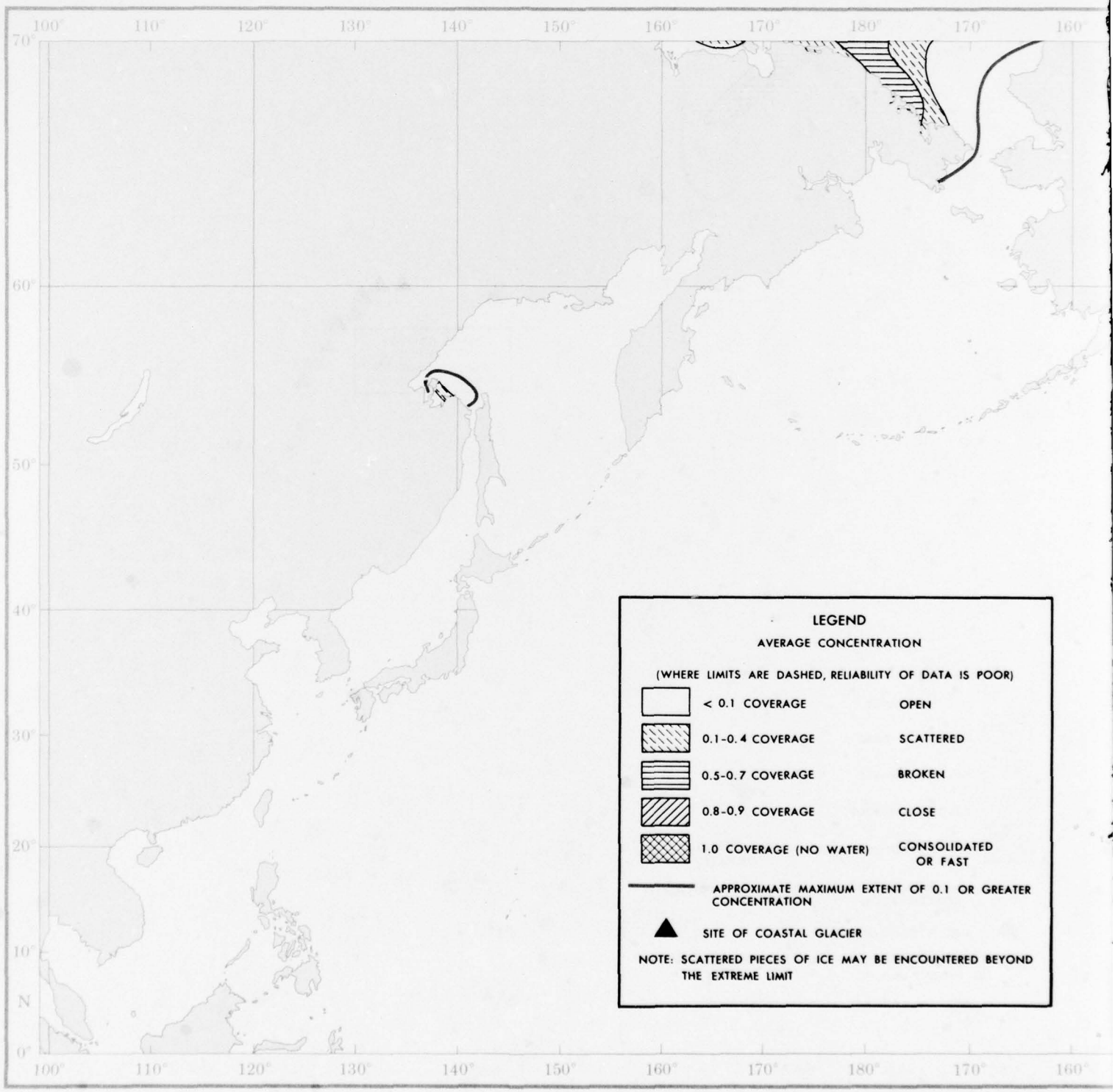


FIG. 16 ICE CONCENTRATION AND EXTREMES



ATION AND EXTREMES

AUGUST

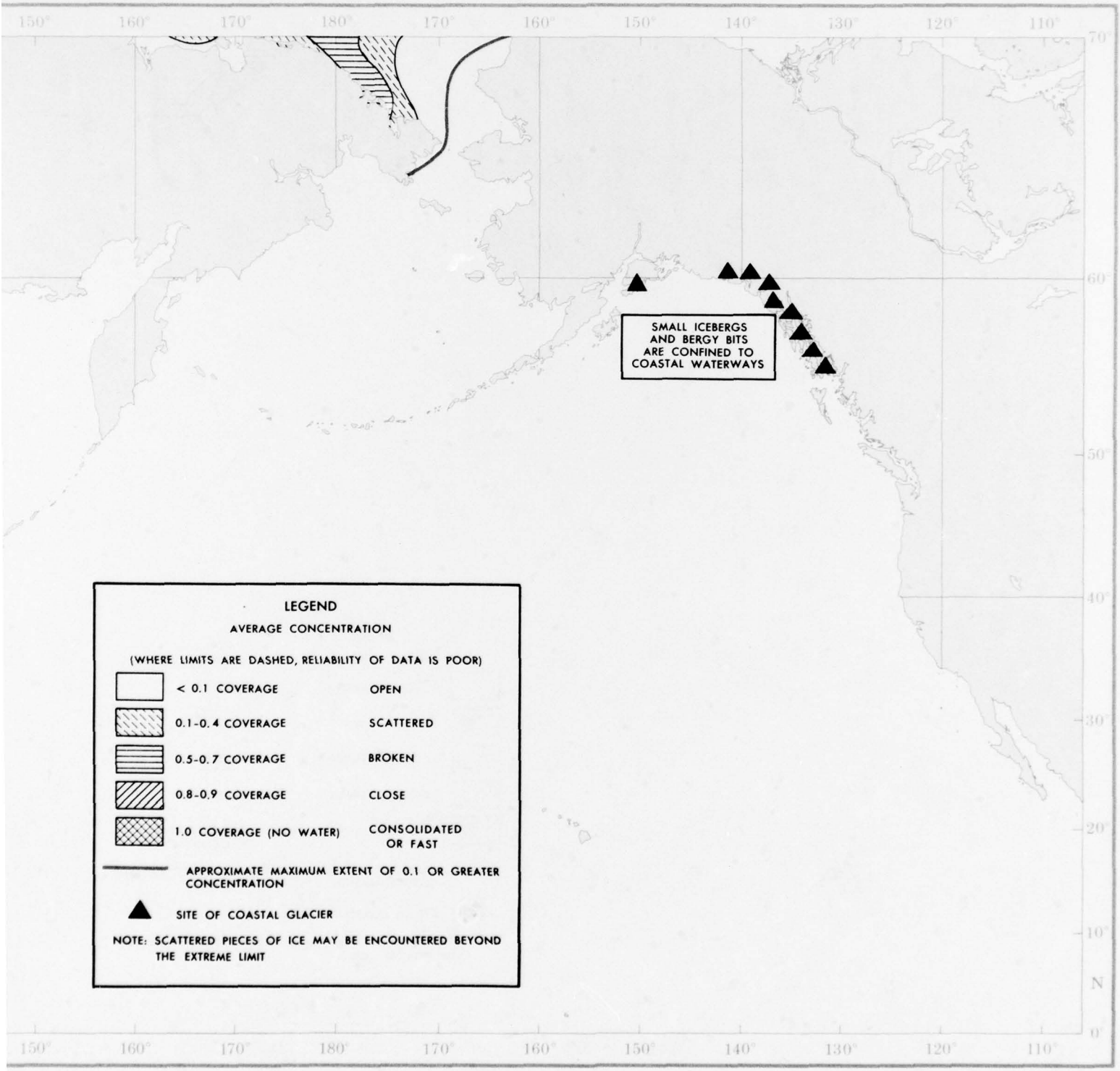
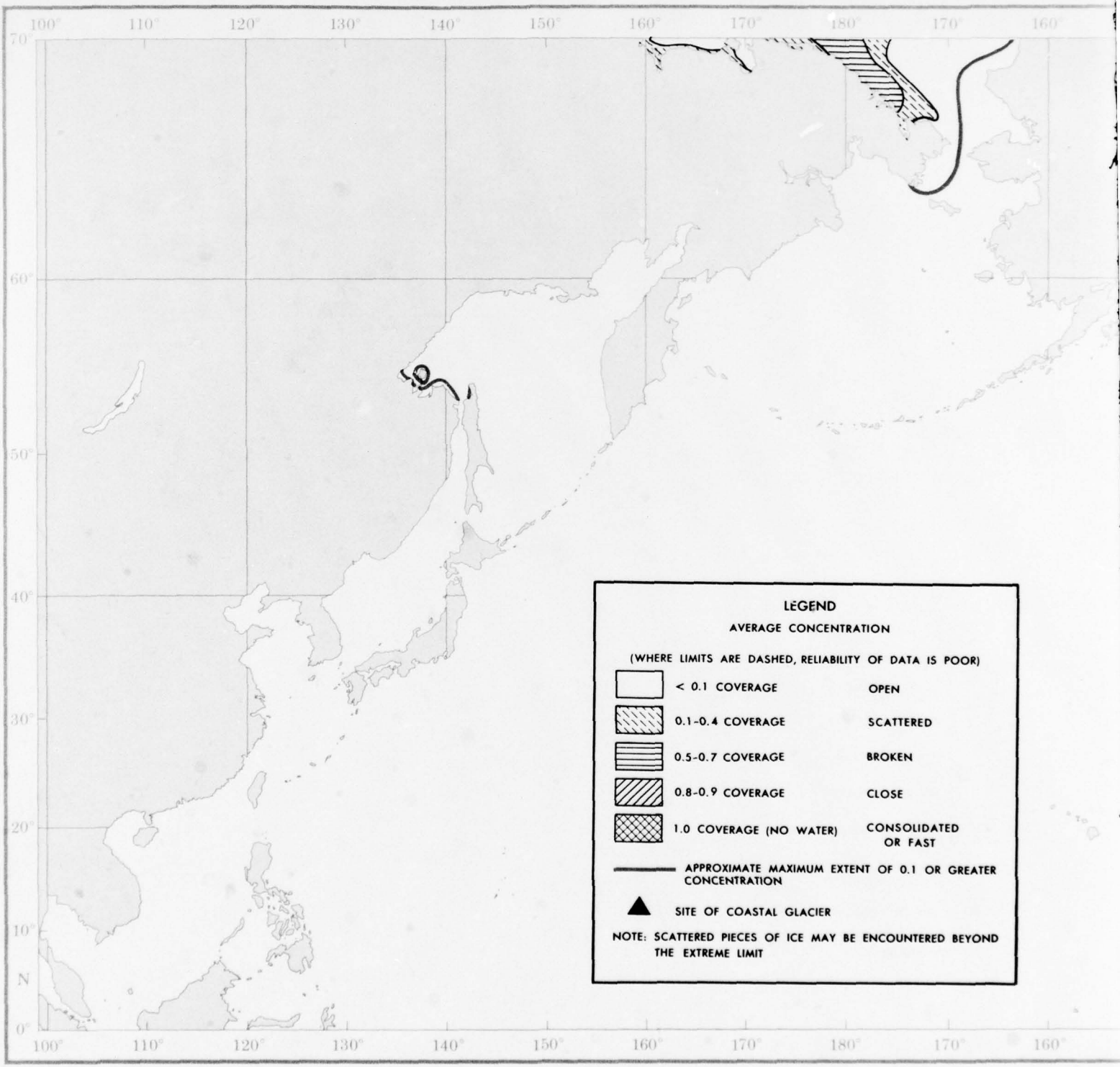


FIG. 17 ICE CONCENTRATION AND EXTREMES



TION AND EXTREMES

SEPTEMBER

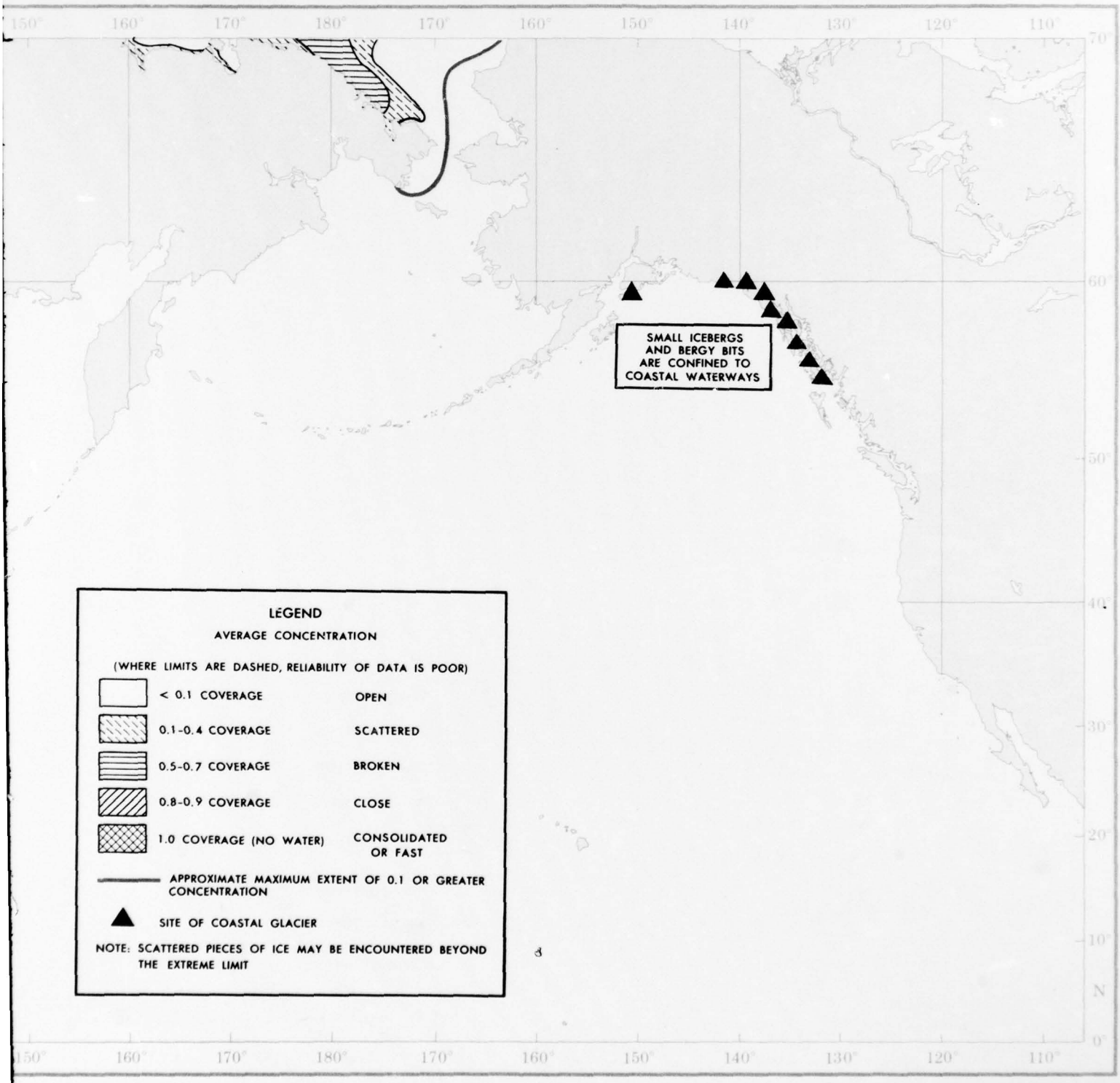
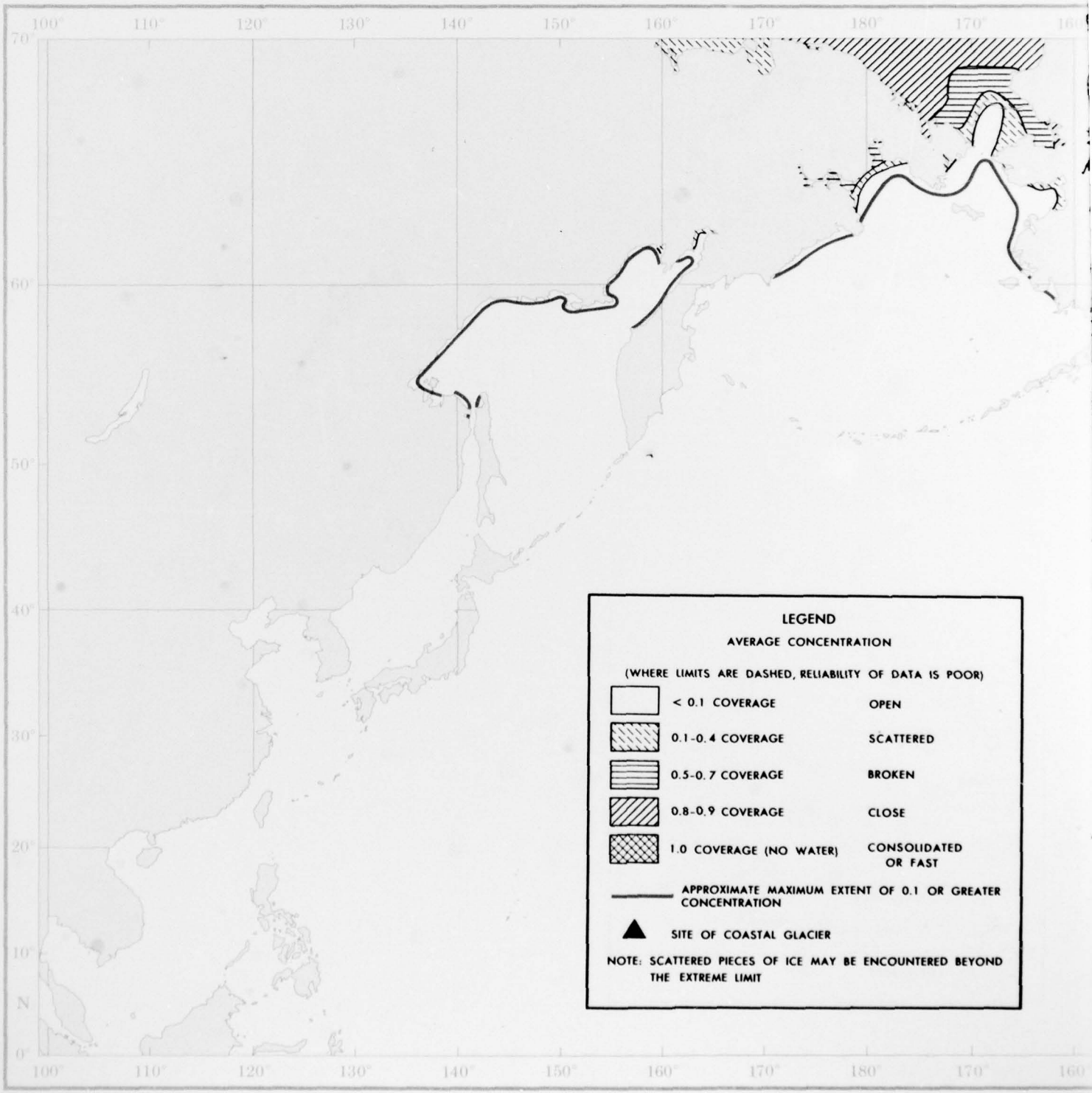


FIG. 18 ICE CONCENTRATION AND EXRTEMES



ATION AND EXRTEMES

OCTOBER

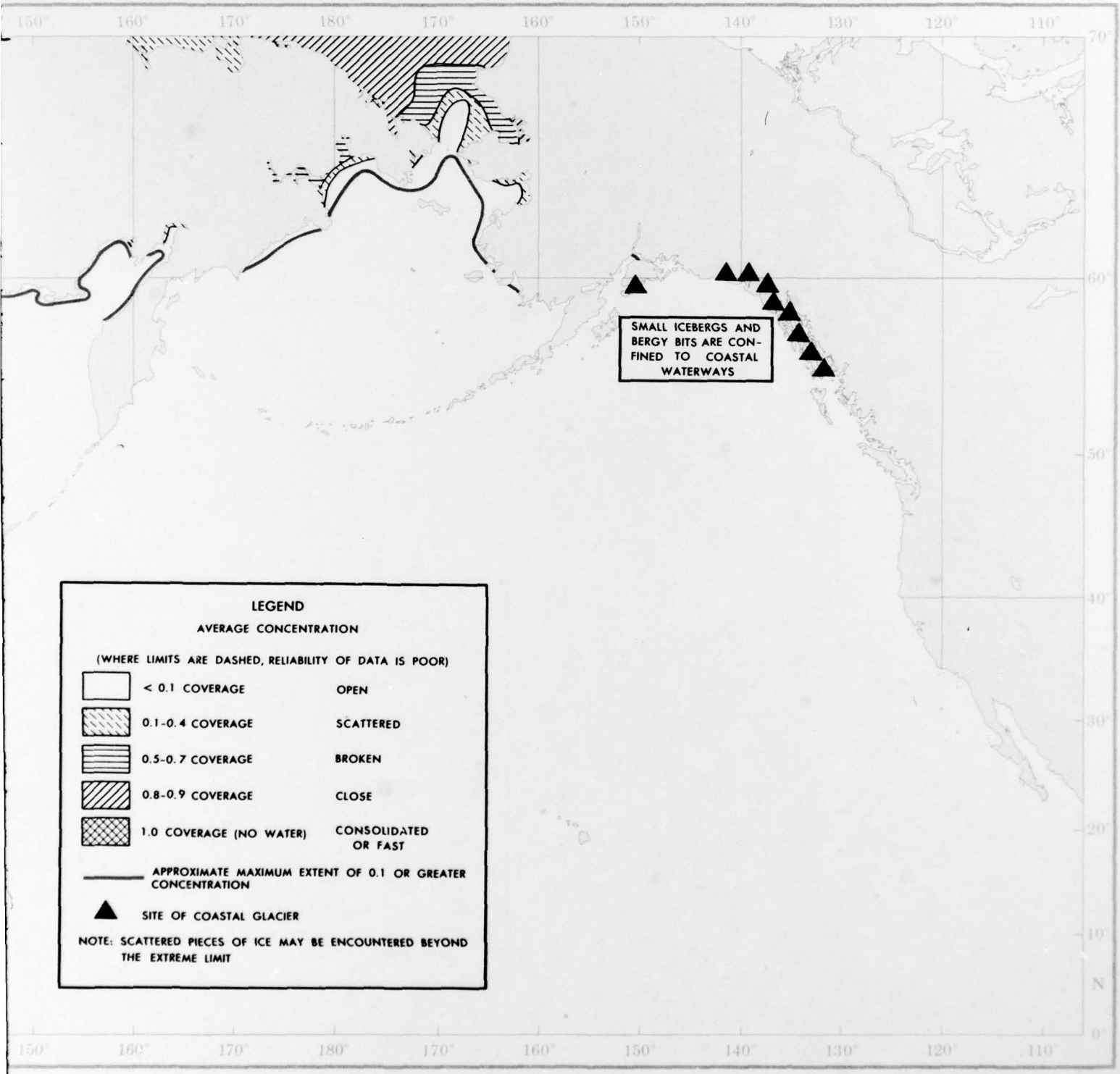
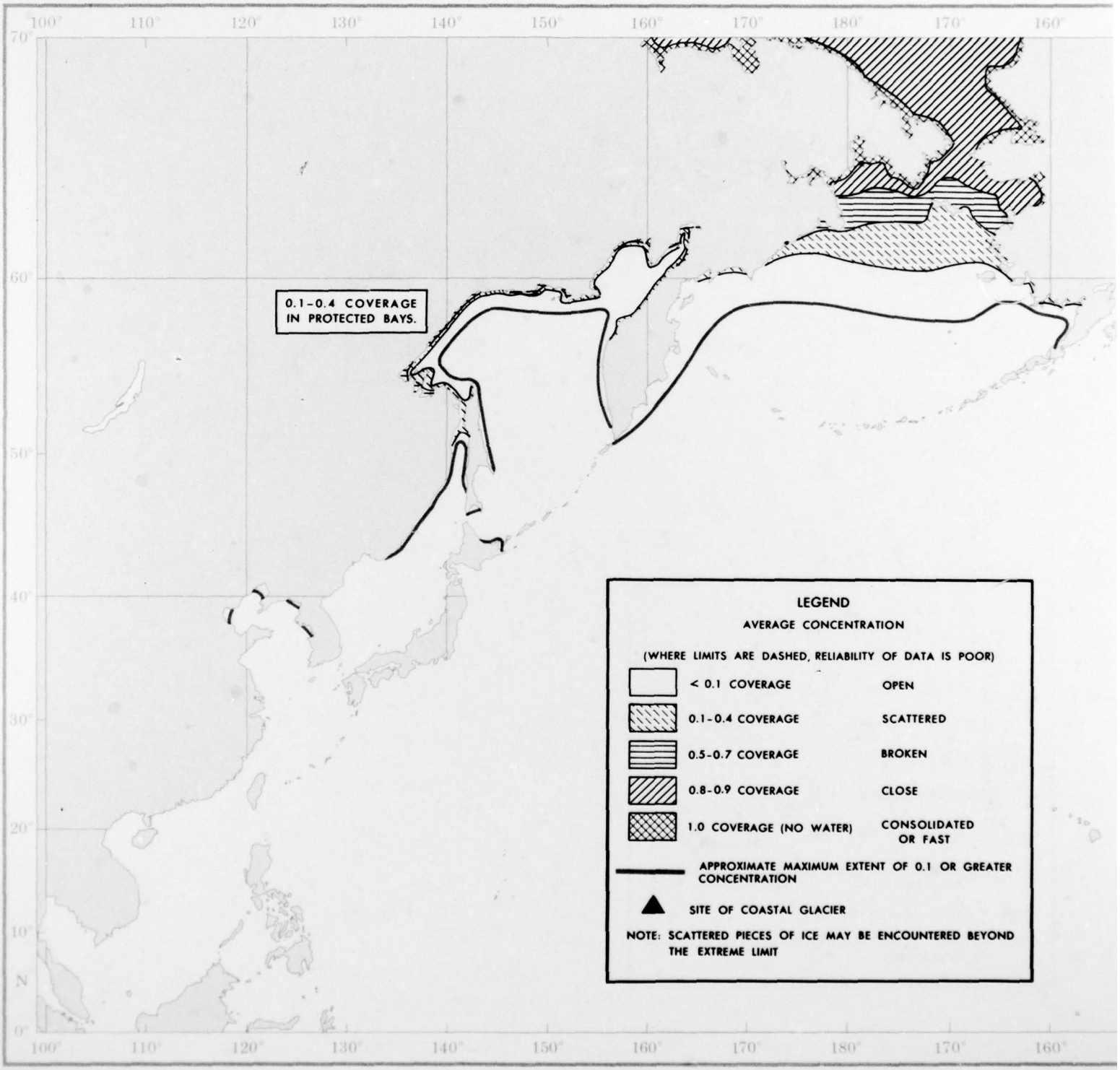


FIG. 19 ICE CONCENTRATION AND EXTREMES



RATION AND EXTREMES

NOVEMBER

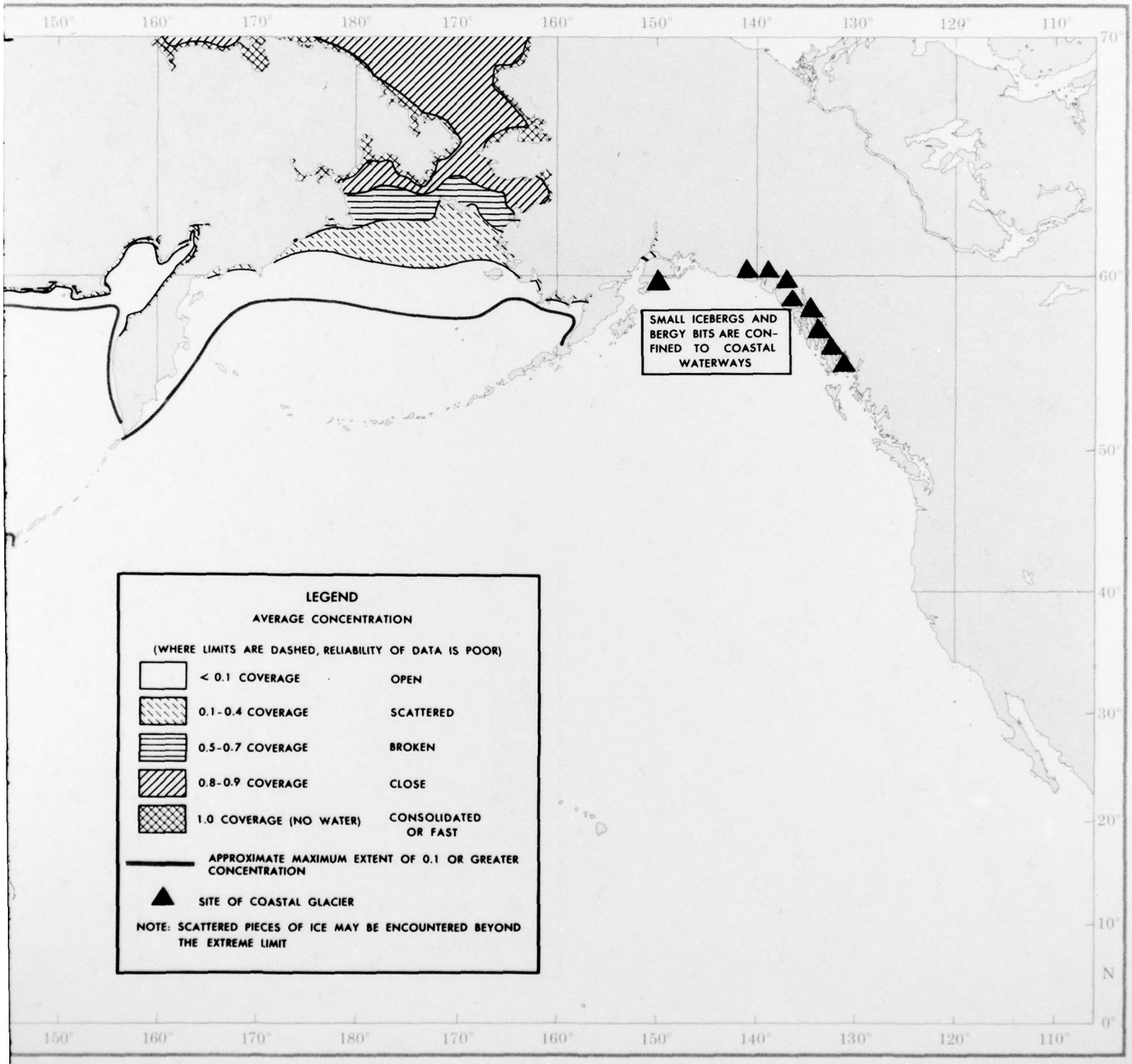
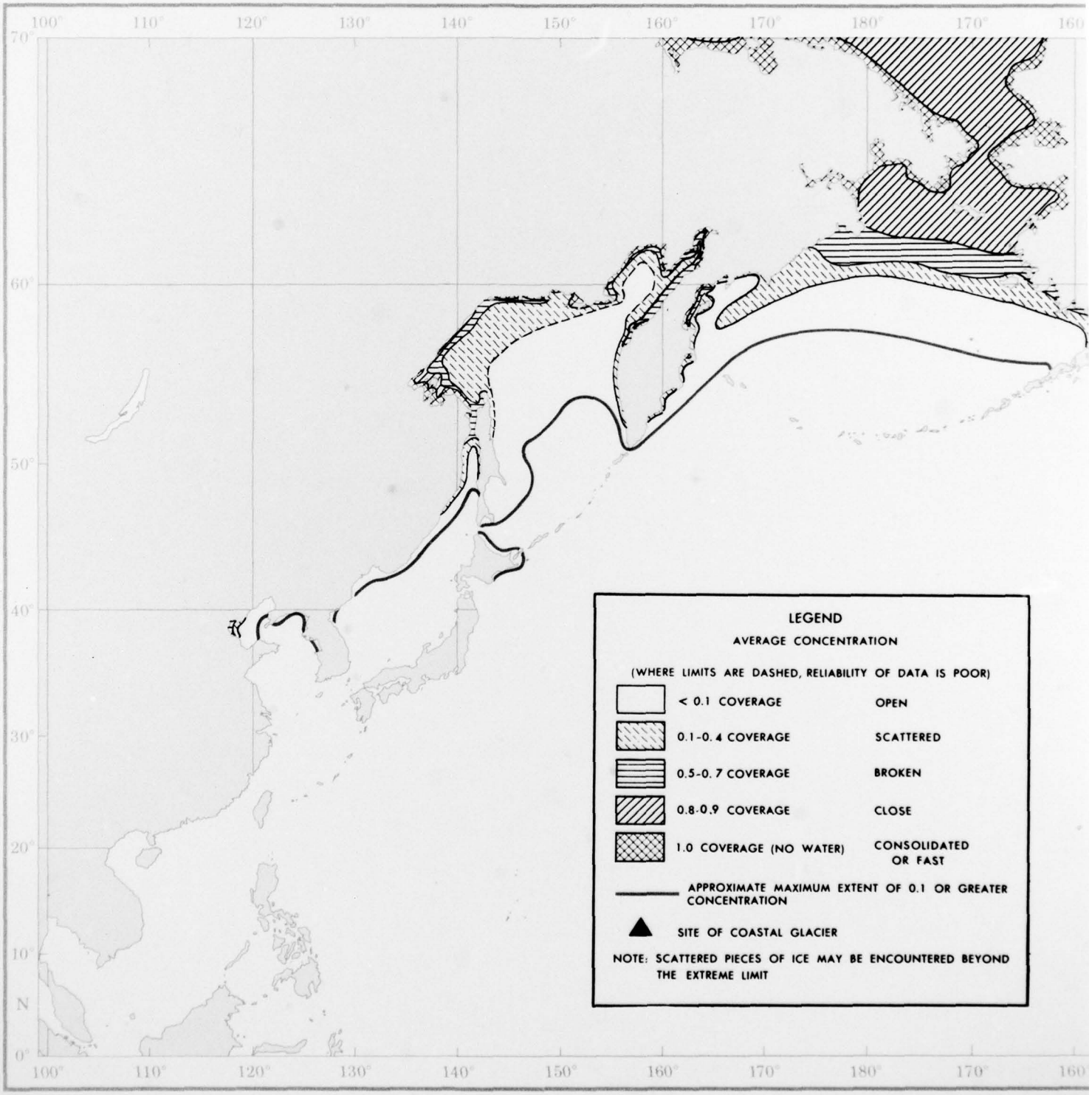


FIG. 20 ICE CONCENTRATION AND EXTREMES



ATION AND EXTREMES

DECEMBER

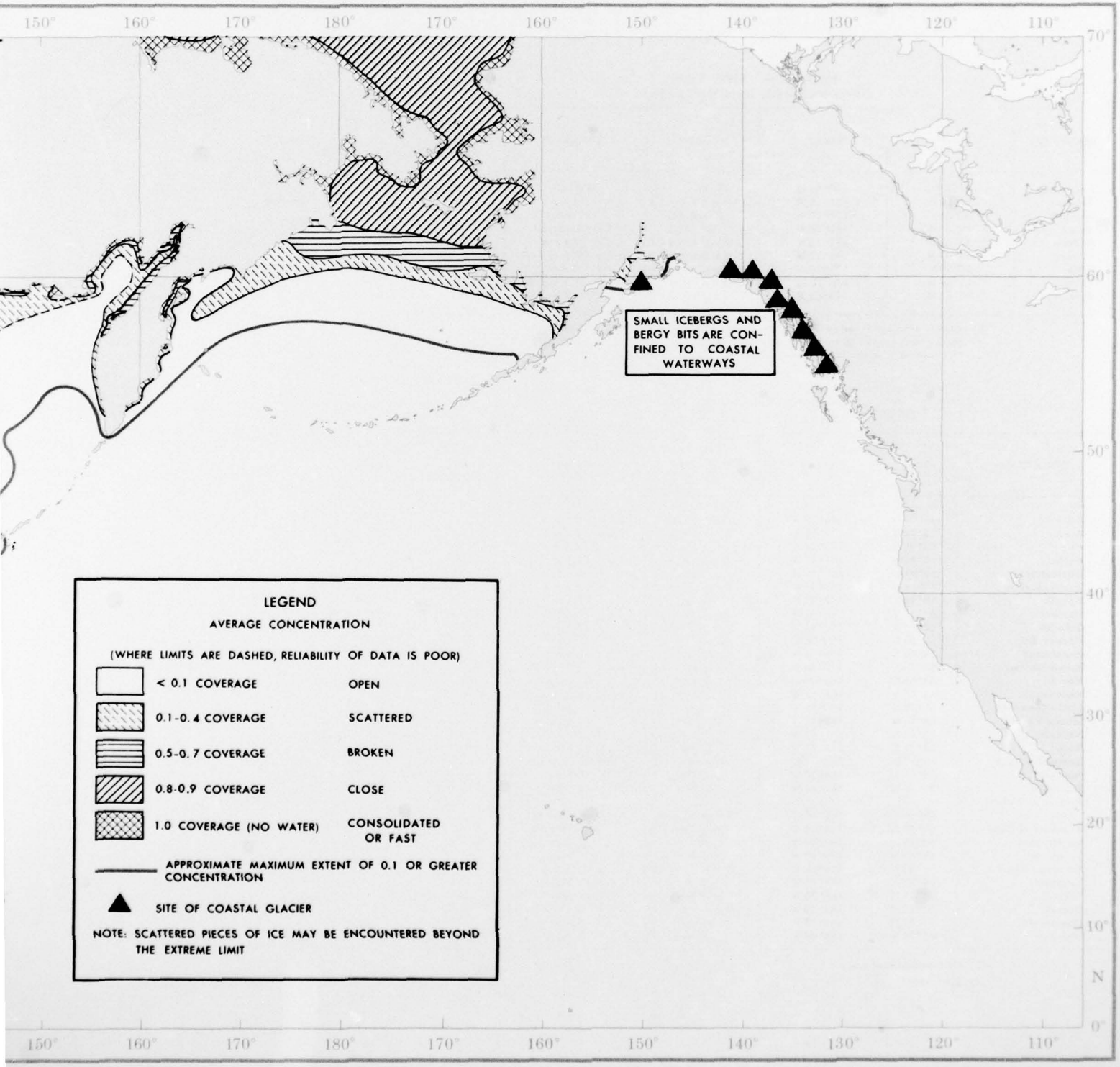


FIG. 21 FREEZE AND BREAKUP DATES

AVERAGE ICE CONDITIONS
UNITED STATES: GULF OF ALASKA

LOCATION	LAT.	LONG.	FREEZEUP	BREAKUP	YEARS OF RECORD
Anchorage	61°10 N	149°55 W	24 Nov.	22 Mar.	15
Juneau	58°18 N	134°25 W	Generally ice free		-
Kasilof	60°23 N	151°18 W	3 Dec. (1)	13 Apr. (1)	13
Kenai	60°33 N	151°16 W	Dec. (1)	Late Mar. (1)	4
Kodiak	57°50 N	152°25 W	Generally ice free		-
Seward	60°07 N	149°27 W	Generally ice free (2)		-
Sitka	57°03 N	135°20 W	Generally ice free		-
Valdez	61°07 N	146°16 W	Generally ice free (2)		-
Whittier	60°46 N	148°43 W	Generally ice free		-

(1) Dates averaged for winters when ice closed ports; may remain open throughout winter in mild years.
(2) Occasional fast ice in January to March.

AVERAGE ICE CONDITIONS
UNITED STATES: BERING SEA

LOCATION	LAT.	LONG.	FREEZEUP	BREAKUP	YEARS OF RECORD
Adak	51°54 N	176°39 W	Generally ice free		-
Atka	52°12 N	174°12 W	Generally ice free		-
Attu	52°56 N	173°14 W	Generally ice free		-
Bethel	60°48 N	161°45 W	28 Oct.	13 May	23
Dillingham	59°01 N	158°31 W	8 Nov.	5 May	15
Dutch Harbor	53°54 N	166°31 W	Generally ice free (1)		-
Egegik	58°12 N	157°30 W	15 Dec.	21 Apr.	6
Gambell	63°50 N	171°36 W	1 Dec.	16 May	9
Golovin	64°33 N	163°02 W	9 Nov.	17 May	7
Hooper Bay	61°29 N	166°08 W	16 Nov.	26 May	3
Kanakanak	59°00 N	158°31 W	22 Nov.	6 May	5
Kiska Harbor	51°58 N	177°34 W	Generally ice free		-
Koyuk	64°55 N	161°10 W	Early Nov.	20 May	3
Kwinhagak	59°45 N	161°52 W	18 Nov.	28 Apr.	5
Little Diomede	65°45 N	168°55 W	Nov. (2)	May (2)	-
Moses Point	64°42 N	161°52 W	Mid-Oct. (2)	May (2)	-
Naknek	58°44 N	157°02 W	12 Nov.	11 Apr.	4
Nome	64°31 N	165°27 W	20 Nov.	27 May	29
Northeast Cape	63°17 N	168°42 W	Mid-Nov. (2)	Early June (2)	-
Nunivak	60°05 N	166°20 W	1 Dec.	20 May	2
Platinum	59°01 N	161°46 W	20 Nov.	22 May	7
Prince of Wales, Cape	65°36 W	168°05 W	Early Nov. (2)	Mid-June (2)	-
Romanzov, Cape	61°47 N	166°02 W	Mid-Nov. (2)	Mid-May (2)	-
St. Michael	63°29 N	162°01 W	9 Nov.	1 June	19
Savoonga	63°45 N	170°20 W	28 Nov.	30 May	7
Shemya Island	52°43 N	174°10 E	Generally ice free		-
Solomon	64°33 N	164°24 W	27 Oct.	16 May	4
Teller	65°18 N	166°20 W	9 Nov.	29 May	12
Umnak	53°10 N	168°20 W	Generally ice free		-
Unalakleet	63°52 N	160°47 W	21 Oct.	16 May	11
Wales	65°38 N	168°04 W	29 Nov.	3 June	11

(1) Occasional fast ice
(2) Estimated

FIG. 22 FREEZE AND BREAKUP DATES (Cont'd)

ICE CONDITIONS

U.S.S.R.: NORTHWEST PACIFIC AND BERING SEA

LOCATION	LAT.	LONG.	FIRST ICE[Δ]			FREEZEUP			BREAKU	
			Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average
Anadyr'	64°45N	177°29E	na	Mid-Oct.	na	12 Nov. (6)	na	5 Dec. (6)	na	Mid-June
Anadyrskiy, Zaliv	64°00N	178°00W	na	Early Oct.	na	Mid-Nov.	na	Early Dec.	na	na
Beringa, Mys	65°00N	175°55W	21 Oct. (7)	na	26 Oct. (7)	30 Oct. (7)	na	3 Dec. (7)	21 Apr. (7)	na
Chaplina, Mys	64°25N	172°15W	27 Sep. (7)	na	10 Dec. (7)	27 Oct. (7)	na	1 Feb. (7)	10 June (7)	na
Dezhnëva, Bukhta	61°42N	173°35E	na	na	na	Early Nov.	na	Late Dec.	na	na
Dezhnëvo	66°03N	169°57W	11 Oct. (5)	na	29 Oct. (5)	28 Oct. (5)	na	29 Nov. (5)	28 May (5)	na
Kamchatskiy Zaliv	55°35N	162°21E	na	Late Dec.	na	Mid-Nov.	na	Mid-Jan.	na	na
Karaga, Bukhta	59°05N	163°00E	Early Nov.	Mid-Nov.	na	na	na	na	na	na
Komandorskiye Ostrova	55°00N	167°00E	Mid-Oct.	Nov.	na	Late Dec.	#	*	*	#
Korfa, Zaliv	60°00N	165°45E	na	Mid-Nov.	na	15 Nov. (5)	na	30 Dec. (5)	15 Apr. (5)	na
Kresta, Zaliv	66°00N	179°15W	Early Oct.	Mid-Oct.	na	30 Oct. (5)	25 Nov. (5)	18 Dec. (5)	na	Late May
Mayachnyy, Mys	52°53N	158°42E	23 Nov. (12)	na	28 Dec. (12)	28 Jan. (12)	na	16 Feb. (12)	3 Mar. (12)	na
Navarin, Mys	62°15N	179°05E	na	na	na	Mid-Nov.	na	Late Dec.	na	na
Ol'ga, Mys	54°29N	161°20E	na	Mid-Nov.	na	na	na	na	na	na
Olyutorskiy, Mys	59°55N	170°27E	na	Early Nov.	na	Late Nov.	na	Late Dec.	na	na
Provideniya, Bukhta	64°25N	173°24W	18 Sep. (8)	Late Sep.	25 Oct. (8)	24 Oct. (8)	na	3 Jan. (8)	8 Apr. (8)	na
Ukinskaya, Guba	57°53N	162°22E	na	Late Nov.	na	Mid-Nov.	Early Jan.	Late Jan.	Mid-Mar.	Late May
Ust'Kamchatsk	56°15N	162°30E	Late Oct.	na	na	Early Nov.	na	Late Nov.	na	na

Footnotes:

[Δ] First occurrence of ice may be grease, fast, or drift ice.

Numbers in parentheses below dates refer to years of data used in computing date given. Exact dates (e.g., 12 Nov.) are more accurate than inde

When dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.

na Not available.

(unk) Number of years unknown.

Occurrence of no ice or freezeup during a season for all years of record is greater than 50 percent.

* In at least one year of record no ice or freezeup occurred during a season.

AKUP DATES (Cont'd)

ICE CONDITIONS

S.S.R.: NORTHWEST PACIFIC AND BERING SEA

ICE		FREEZEUP			BREAKUP			LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
rage	Latest	Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest		
Oct.	na	12 Nov. (6)	na	5 Dec. (6)	na	Mid-June	na	29 Apr. (6)	Late June	9 July (6)	7.2 (4)	8.2 (4)
Oct.	na	Mid-Nov.	na	Early Dec.	na	na	na	Late Apr.	Late June	Early July	7.2 (unk)	na
	26 Oct. (7)	30 Oct. (7)	na	3 Dec. (7)	21 Apr. (7)	na	9 May (7)	25 Apr. (7)	na	18 July (7)	na	na
	10 Dec. (7)	27 Oct. (7)	na	1 Feb. (7)	10 June (7)	na	2 July (7)	20 June (6)	na	15 July (6)	na	na
	na	Early Nov.	na	Late Dec.	na	na	na	Late Apr.	na	Mid-June	na	na
	29 Oct. (5)	28 Oct. (5)	na	29 Nov. (5)	28 May (5)	na	2 June (5)	9 June (5)	na	8 July (5)	na	na
Dec.	na	Mid-Nov.	na	Mid-Jan.	na	na	na	Late Feb.	Early June	na	na	na
Nov.	na	na	na	na	na	na	na	na	Late Apr.	Early May	na	na
.	na	Late Dec.	#	*	*	#	na	na	Feb.	Mid-Mar.	na	na
Nov.	na	15 Nov. (5)	na	30 Dec. (5)	15 Apr. (5)	na	23 Apr. (5)	18 Apr. (5)	Mid-June	16 June (5)	na	na
st.	na	30 Oct. (5)	25 Nov. (5)	18 Dec. (5)	na	Late May	Early June	25 Apr. (5)	24 June (5)	18 July (5)	na	na
	28 Dec. (12)	28 Jan. (12)	na	16 Feb. (12)	3 Mar. (12)	na	27 Apr. (12)	26 Mar. (12)	na	28 May (12)	na	na
	na	Mid-Nov.	na	Late Dec.	na	na	na	Late May	Early June	Mid-July	na	na
ov.	na	na	na	na	na	na	na	na	Mid-Apr.	na	na	na
Nov.	na	Late Nov.	na	Late Dec.	na	na	na	Early Apr.	na	Mid-June	na	na
ep.	25 Oct. (8)	24 Oct. (8)	na	3 Jan. (8)	8 Apr. (8)	na	25 June (8)	2 June (7)	Late June	16 July (7)	na	na
ov.	na	Mid-Nov.	Early Jan.	Late Jan.	Mid-Mar.	Late May	Late June	na	Late June	Mid-July	2.6 (2)	na
	na	Early Nov.	na	Late Nov.	na	na	na	Late Apr.	na	Mid-May	na	na

ft ice.
f data used in computing date given. Exact dates (e.g., 12 Nov.) are more accurate than indefinite dates (e.g., Mid-Oct.).
cord were either indeterminable or of less than five years' duration.

all years of record is greater than 50 percent.
curred during a season.

FIG. 23 FREEZE AND BREAKUP DATES (Cont'd)

ICE CONDITIONS

U.S.S.R.: SEA OF OKHOTSK

LOCATION	LAT.	LONG.	FIRST ICE△			FREEZEUP			BREAKUP			LAST ICE			Mean maximum thickness (feet)
			Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest	
Aniva, Zaliv	46°16N	142°48E	Early Nov.	na	Late Nov.	na	na	na	na	na	na	Mid-Apr.	na	Mid-May	3.0 (unk)
Ayan	56°27N	138°10E	18 Oct. (7)	na	27 Oct. (7)	25 Nov. (7)	na	22 Jan. (7)	10 Mar. (7)	na	na	20 May (7)	na	25 June (7)	3.5 (unk)
Bol'shaya Vorovskaya	54°14N	155°48E	na	Dec.	na	Mid-Dec.	na	Mid-Jan.	na	na	na	Late Feb.	na	Early May	na
Chkalov	53°18N	141°28E	20 Oct. (5)	28 Oct. (5)	7 Nov. (5)	8 Dec. (5)	18 Dec. (5)	26 Dec. (5)	18 May (5)	22 May (5)	25 May (5)	6 June (5)	16 June (5)	26 June (5)	4.2 (5)
Chumikan	54°42N	135°19E	12 Oct. (6)	24 Oct. (6)	13 Nov. (6)	1 Nov. (5)	15 Dec. (5)	18 Jan. (5)	1 April (7)	8 May (7)	28 June (7)	27 Apr. (7)	17 June (7)	15 July (7)	na
Gizhiginskaya Guba	61°30N	158°00E	na	Late Oct. to early Nov.	na	Late Nov.	na	Late Dec.	na	May	na	Late Mar.	na	Mid-July	na
Kamenskoe	62°30N	165°10E	Early Oct.	15 Oct. (6)	na	Early Nov.	na	Mid-Dec.	na	na	na	Early May	Early June	Early July	na
Khanyángda, Mys	57°50N	140°31E	na	Nov.	na	na	na	na	na	May	na	na	June	na	na
Khayryuzovyy, Mys	57°06N	156°34E	na	Early Nov.	na	na	Dec.	na	na	Apr.	na	na	Early May	na	2.0 (unk)
Korsakov	46°38N	142°46E	Early Nov.	26 Nov. (22)	Early Dec.	na	18 Jan. (22)	na	na	14 Mar. (22)	na	Late Mar.	na	Early May	2.0 (unk)
Krutogorova	55°02N	155°36E	na	na	na	17 Dec. (6)	na	15 Jan. (6)	na	na	na	20 Feb. (6)	na	25 Apr. (6)	na
Kushka	61°58N	160°22E	na	Mid-Oct.	na	Late Nov.	na	Late Dec.	Late Mar.	na	Early June	Late Mar.	na	Late June	na
Motykleyskiy, Zaliv	59°24N	148°50E	na	Early Nov.	na	na	na	na	na	Late May to early June	na	na	Mid-June	na	3.2 (unk)
Nagayeva, Bukhta	59°32N	150°40E	na	Mid-Nov.	na	na	Late Nov.	na	na	Late May to early June	na	na	Mid-June	na	2.5 (unk)
Navil', Reyd	51°43N	143°21E	na	Late Nov.	na	na	na	na	na	na	na	na	Mid-May	na	na
Nikolaya, Zaliv	53°40N	138°35E	na	Mid-Nov.	na	Early Nov.	na	Mid-Dec.	na	Late May	na	Late May	Early July	Late July	na
Nosappu-saki	43°23N	145°49E	20 Dec. (8)	8 Jan. (8)	18 Jan. (8)	na	na	na	na	na	na	12 Mar. (8)	30 Mar. (8)	11 Apr. (8)	na
Odyan, Zaliv	59°12N	152°00E	na	Early Nov.	na	na	na	na	na	na	na	na	Early to mid-June	na	na
Okhotsk	59°23N	143°18E	na	Mid-Nov.	Mid-Jan.	Late Nov.	na	Late Jan.	na	na	na	19 Mar. (7)	19 May (7)	21 June (7)	6.5 (unk)
Ozernovskiy	51°30N	156°31E	na	Mid-Jan.	na	Mid-Dec.	na	Late Jan.	na	na	na	Mid-Mar.	Early Apr.	Late Apr.	na
Palana (River)	59°03N	159°48E	na	Mid-Nov.	na	22 Nov. (7)	na	15 Jan. (7)	na	na	na	11 Feb. (7)	Mid-Apr	26 Apr. (7)	3.2 (unk)
Paramushir, Ostrov	50°25N	155°50E	na	Late Dec.	Feb.	na	na	na	na	na	na	na	na	na	na
Penzhinskaya Guba	61°00N	162°00E	na	Mid-Nov.	na	Early Nov.	na	Mid-Dec.	na	May	na	Early May	June	Early July	5.0 (unk)
Poronaysk	49°13N	143°07E	na	27 Nov. (21)	na	na	na	na	na	16 Apr. (21)	June	na	na	na	3.3 (unk)
Sakhalinskiy Zaliv	53°45N	141°30E	na	Late Oct.	na	na	Mid-Nov.	na	na	June	na	na	July	na	na
Severnyy, Zaliv	54°22N	142°25E	na	na	na	na	na	na	na	na	na	na	Late June to early July	Late Aug.	na
Shantar	54°52N	137°30E	24 Oct. (5)	1 Nov. (5)	6 Nov. (5)	Late Nov.	Mid-Dec.	Late Dec.	9 May (5)	22 May (5)	27 May (5)	15 June (5)	4 July (5)	18 July (5)	4.4 (unk)
Tauyskaya Guba	59°20N	150°20E	na	Mid-Nov.	na	18 Nov. (5)	na	17 Dec. (5)	na	Early May	na	15 Apr. (5)	Mid-June	Early July	na
Tugurskiy Zaliv	54°00N	137°00E	na	Late Oct. to early Nov.	na	na	na	na	na	Late Mar.	na	na	na	na	na
Udskaya Guba	54°50N	135°45E	Ice all year	Early Nov.	na	Mid-Nov.	na	Mid-Dec.	na	Late May	na	Late Apr.	na	Ice all year	na
Ul banskiy Zaliv	53°38N	137°45E	na	na	na	na	na	na	na	June	na	na	Late June	na	na
Urkt, Reyd	53°34N	143°09E	na	Late Nov.	na	na	na	na	na	na	na	na	Mid-May	na	na
Ust'-Bol'sheretsk	52°48N	156°14E	na	na	na	Mid-Dec.	na	Late Jan.	na	na	na	Mid-Mar.	na	Early May	na
Ust'-Tigil'	58°01N	158°12E	na	na	na	27 Nov. (5)	na	13 Jan. (5)	na	na	na	10 Mar. (5)	na	24 Apr. (5)	na
Voyampolka (River)	58°30N	159°10E	na	Early Dec.	na	Late Nov.	na	Mid-Jan.	na	na	na	Mid-Feb.	Early Apr.	Late Apr.	na
Yamskaya Guba	59°40N	154°25E	28 Oct. (6)	7 Nov. (6)	24 Nov. (6)	7 Dec. (6)	6 Jan. (6)	21 Feb. (6)	13 Apr. (6)	20 May (6)	6 June (6)	10 May (6)	16 June (6)	4 July (6)	5.1 (5)
Yuzhnyy, Mys	57°45N	156°45E	na	Late Nov.	na	na	na	na	na	na	na	na	Early Apr.	na	na
Zav'yalova, Ostrov	59°03N	150°37E	na	Dec.	na	na	Dec.	na	na	Late May	na	na	June	na	na

Footnotes: △ First occurrence of ice may be grease, fast, or drift ice.
Numbers in parentheses below dates refer to years of data used in computing date given. Exact dates (e.g., 18 Oct.) are more accurate than indefinite dates (e.g., Early Nov.). When dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.
na Not available.
(unk) Number of years unknown.

FIG. 23 FREEZE AND BREAKUP DATES (Cont'd)

ICE CONDITIONS

U.S.S.R.: SEA OF OKHOTSK

LOCATION	LAT.	LONG.	FIRST ICE △			FREEZEUP			BREAKUP			LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
			Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest		
, Zaliv	46°16N	142°48E	Early Nov.	na	Late Nov.	na	na	na	na	na	na	Mid-Apr.	na	Mid-May	3.0 (unk)	na
	56°27N	138°10E	18 Oct. (7)	na	27 Oct. (7)	25 Nov. (7)	na	22 Jan. (7)	10 Mar. (7)	na	na	20 May (7)	na	25 June (7)	3.5 (unk)	na
aya Vorovskaya	54°14N	155°48E	na	Dec.	na	Mid-Dec.	na	Mid-Jan.	na	na	na	Late Feb.	na	Early May	na	na
ov	53°18N	141°28E	20 Oct. (5)	28 Oct. (5)	7 Nov. (5)	8 Dec. (5)	18 Dec. (5)	26 Dec. (5)	18 May (5)	22 May (5)	25 May (5)	6 June (5)	16 June (5)	26 June (5)	4.2 (5)	5.0 (5)
an	54°42N	135°19E	12 Oct. (6)	24 Oct. (6)	13 Nov. (6)	1 Nov. (5)	15 Dec. (5)	18 Jan. (5)	1 April (7)	8 May (7)	28 June (7)	27 Apr. (7)	17 June (7)	15 July (7)	na	na
ginskaya Guba	61°30N	158°00E	na	Late Oct. to early Nov.	na	Late Nov.	na	Late Dec.	na	May	na	Late Mar.	na	Mid-July	na	na
skoe	62°30N	165°10E	Early Oct.	15 Oct. (6)	na	Early Nov.	na	Mid-Dec.	na	na	na	Early May	Early June	Early July	na	na
ingda, Mys	57°50N	140°31E	na	Nov.	na	na	na	na	na	May	na	na	June	na	na	na
yuzovyy, Mys	57°06N	156°34E	na	Early Nov.	na	na	Dec.	na	na	Apr.	na	na	Early May	na	2.0 (unk)	na
tov	46°38N	142°46E	Early Nov.	26 Nov. (22)	Early Dec.	na	18 Jan. (22)	na	na	14 Mar. (22)	na	Late Mar.	na	Early May	2.0 (unk)	na
gorova	55°02N	155°36E	na	na	na	17 Dec. (6)	na	15 Jan. (6)	na	na	na	20 Feb. (6)	na	25 Apr. (6)	na	na
a	61°58N	160°22E	na	Mid-Oct.	na	Late Nov.	na	Late Dec.	Late Mar.	na	Early June	Late Mar.	na	Late June	na	na
leyskiy, Zaliv	59°24N	148°50E	na	Early Nov.	na	na	na	na	na	Late May to early June	na	na	Mid-June	na	3.2 (unk)	na
eva, Bukhta	59°32N	150°40E	na	Mid-Nov.	na	na	Late Nov.	na	na	Late May to early June	na	na	Mid-June	na	2.5 (unk)	na
, Reyd	51°43N	143°21E	na	Late Nov.	na	na	na	na	na	na	na	na	Mid-May	na	na	na
kya, Zaliv	53°40N	138°35E	na	Mid-Nov.	na	Early Nov.	na	Mid-Dec.	na	Late May	na	Late May	Early July	Late July	na	na
yu-saki	43°23N	145°49E	20 Dec. (8)	8 Jan. (8)	18 Jan. (8)	na	na	na	na	na	na	12 Mar. (8)	30 Mar. (8)	11 Apr. (8)	na	na
, Zaliv	59°12N	152°00E	na	Early Nov.	na	na	na	na	na	na	na	na	Early to mid-June	na	na	na
ik	59°23N	143°18E	na	Mid-Nov.	Mid-Jan.	Late Nov.	na	Late Jan.	na	na	na	19 Mar. (7)	19 May (7)	21 June (7)	6.5 (unk)	9.9 (unk)
vskiy	51°30N	156°31E	na	Mid-Jan.	na	Mid-Dec.	na	Late Jan.	na	na	na	Mid-Mar.	Early Apr.	Late Apr.	na	na
(River)	59°03N	159°48E	na	Mid-Nov.	na	22 Nov. (7)	na	15 Jan. (7)	na	na	na	11 Feb. (7)	Mid-Apr	26 Apr. (7)	3.2 (unk)	7.0 (unk)
shir, Ostrov	50°25N	155°50E	na	Late Dec.	Feb.	na	na	na	na	na	na	na	na	na	na	na
nskaya Guba	61°00N	162°00E	na	Mid-Nov.	na	Early Nov.	na	Mid-Dec.	na	May	na	Early May	June	Early July	5.0 (unk)	na
ysk	49°13N	143°07E	na	27 Nov. (21)	na	na	na	na	na	16 Apr. (21)	June	na	na	na	3.3 (unk)	na
inskiy Zaliv	53°45N	141°30E	na	Late Oct.	na	na	Mid-Nov.	na	na	June	na	na	July	na	na	na
yy, Zaliv	54°22N	142°25E	na	na	na	na	na	na	na	na	na	na	Late June to early July	Late Aug.	na	na
r	54°52N	137°30E	24 Oct. (5)	1 Nov. (5)	6 Nov. (5)	Late Nov.	Mid-Dec.	Late Dec.	9 May (5)	22 May (5)	27 May (5)	15 June (5)	4 July (5)	18 July (5)	4.4 (unk)	5.0 (unk)
kya Guba	59°20N	150°20E	na	Mid-Nov.	na	18 Nov. (5)	na	17 Dec. (5)	na	Early May	na	15 Apr. (5)	Mid-June	Early July	na	na
kiy Zaliv	54°00N	137°00E	na	Late Oct. to early Nov.	na	na	na	na	na	Late Mar.	na	na	na	na	na	na
a Guba	54°50N	135°45E	Ice all year	Early Nov.	na	Mid-Nov.	na	Mid-Dec.	na	Late May	na	Late Apr.	na	Ice all year	na	na
kiy Zaliv	53°38N	137°45E	na	na	na	na	na	na	na	June	na	na	Late June	na	na	na
Reyd	53°34N	143°05E	na	Late Nov.	na	na	na	na	na	na	na	na	Mid-May	na	na	na
l'sheretsk	52°48N	156°14E	na	na	na	Mid-Dec.	na	Late Jan.	na	na	na	Mid-Mar.	na	Early May	na	na
gil'	58°01N	158°12E	na	na	na	27 Nov. (5)	na	13 Jan. (5)	na	na	na	10 Mar. (5)	na	24 Apr. (5)	na	na
lka (River)	58°30N	159°10E	na	Early Dec.	na	Late Nov.	na	Mid-Jan.	na	na	na	Mid-Feb.	Early Apr.	Late Apr.	na	na
a Guba	59°40N	154°25E	28 Oct. (6)	7 Nov. (6)	24 Nov. (6)	7 Dec. (6)	6 Jan. (6)	21 Feb. (6)	13 Apr. (6)	20 May (6)	6 June (6)	10 May (6)	16 June (6)	4 July (6)	5.1 (5)	6.6 (5)
, Mys	57°45N	156°45E	na	Late Nov.	na	na	na	na	na	na	na	na	Early Apr.	na	na	na
ova, Ostrov	59°03N	150°37E	na	Dec.	na	na	Dec.	na	na	Late May	na	na	June	na	na	na

s: △ First occurrence of ice may be grease, fast, or drift ice.
Numbers in parentheses below dates refer to years of data used in computing date given. Exact dates (e.g., 18 Oct.) are more accurate than indefinite dates (e.g., Early Nov.).
When dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.
na Not available.
(unk) Number of years unknown.

FIG. 24 FREEZE AND BREAKUP DATES (Cont'd)

ICE CONDITIONS

U.S.S.R.: SEA OF JAPAN (INCLUDING TATAR STRAIT)

LOCATION	LAT.	LONG.	FIRST ICE Δ			FREEZEUP			BREAKUP		
			Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest
Aleksandrovsk-Sakhalinskiy	50°54N	142°10E	12 Nov. (23)	24 Nov. (23)	11 Dec. (23)	17 Dec. (5)	23 Dec. (23)	12 Jan. (5)	20 Feb. (5)	13 Mar. (23)	23 Mar. (5)
Amurskiy Zaliv	43°10N	131°50E	14 Nov. (25)	3 Dec. (23)	30 Dec. (25)	18 Dec. (6)	4 Jan. (23)	na	na	27 Feb. (23)	15 Mar. (6)
Askol'd, Ostrov	42°45N	132°20E	Mid-Dec.	Early Jan.	na	19 Dec. (10)	#	*	*	#	3 Mar. (10)
Belkina, Mys	45°50N	137°41E	22 Nov. (21)	27 Dec. (21)	15 Jan. (21)	na	#	*	*	#	na
De-Kastri	51°28N	140°47E	11 Nov. (11)	Mid-Nov.	1 Dec. (11)	16 Nov. (11)	na	24 Dec. (11)	5 Apr. (10)	na	3 May (10)
Ekspeditsii, Bukhta	42°40N	130°45E	30 Oct. (6)	10 Nov. (6)	1 Dec. (6)	5 Dec. (6)	25 Dec. (6)	8 Jan. (6)	13 Feb. (6)	28 Feb. (6)	14 Mar. (6)
Gamova, Mys	42°33N	131°12E	26 Nov. (36)	3 Jan. (36)	31 Jan. (36)	Mid-Jan.	#	*	*	#	Late Mar.
Lazareva, Mys	52°15N	141°32E	1 Nov. (5)	na	29 Nov. (5)	30 Nov. (5)	na	29 Dec. (5)	30 Apr. (5)	na	19 May (5)
Lesogorsk	49°27N	142°08E	3 Dec. (5)	11 Dec. (5)	19 Dec. (5)	na	#	*	*	#	na
Milyutina, Mys	49°02N	140°20E	2 Nov. (23)	3 Dec. (22)	28 Dec. (23)	Mid-Dec.	14 Jan. (22)	Early Feb.	Late Feb.	12 Mar. (22)	Late Apr.
Nakhodka	42°48N	132°52E	22 Nov. (17)	3 Dec. (17)	15 Dec. (17)	na	4 Jan. (17)	na	na	1 Mar. (17)	na
Nevel'sk	46°40N	141°51E	na	3 Jan. (5)	na	na	#	*	*	#	na
Nikolayevsk-na-Amure	53°08N	140°44E	28 Oct. (6)	Early Nov.	12 Nov. (6)	30 Oct. (6)	Mid-Nov.	27 Nov. (6)	10 May (6)	Mid-May	19 May (6)
Nizmennyy, Mys	43°30N	135°12E	4 Dec. (27)	5 Jan. (27)	11 Feb. (27)	na	na	na	na	na	na
Pronge, Mys	52°52N	141°15E	24 Oct. (7)	31 Oct. (7)	11 Nov. (7)	11 Nov. (7)	22 Nov. (7)	5 Dec. (7)	26 Apr. (7)	10 May (7)	21 May (7)
Sovetskaya Gavan'	49°01N	140°18E	10 Oct. (19)	3 Nov. (19)	23 Nov. (19)	na	29 Nov. (19)	na	na	21 Mar. (19)	na
Sōya-kaikyō (La Perouse Strait)	45°45N	142°00E	na	20 Jan (20)	na	na	na	na	na	na	na
Syurkum, Mys	50°05N	140°41E	na	Early Dec.	na	na	na	na	na	na	na
Tatarskiy Proliv	50°00N	141°00E	5 Nov. (33)	27 Nov. (33)	11 Dec. (33)	na	na	na	na	na	na
Terney, Bukhta	45°03N	136°42E	na	Early Dec	na	na	na	na	na	na	na
Tomari	47°46N	142°04E	na	Jan.	na	na	na	na	na	na	na
Ussuriyskiy, Zaliv	43°00N	132°12E	14 Dec. (15)	24 Dec. (14)	15 Jan. (15)	Late Dec.	21 Jan. (14)	na	na	17 Feb. (14)	na
Vesëlyy Yar	43°54N	135°28E	17 Nov. (6)	26 Nov. (6)	5 Dec. (6)	na	na	na	na	na	na
Zolotoy, Mys	47°19N	139°00E	na	Late Dec.	na	na	Mid-Jan.	na	na	na	na

Footnotes: Δ First occurrence of ice may be grease, fast, or drift ice.
Numbers in parentheses below dates refer to years of data used in computing date given. Exact dates (e.g., 12 Nov.) are more accurate than indefinite dates when dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.
na Not available.
Occurrence of no ice or freezeup during a season for all years of record is greater than 50 percent.
* In at least one year of record no ice or freezeup occurred during a season.
(unk) Number of years unknown.

EAKUP DATES (Cont'd)

ICE CONDITIONS

U.S.S.R.: SEA OF JAPAN (INCLUDING TATAR STRAIT)

	FIRST ICE[4]		FREEZEUP			BREAKUP			LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
nt	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest	Earliest	Average	Latest		
r.	24 Nov. (23)	11 Dec. (23)	17 Dec. (5)	23 Dec. (23)	12 Jan. (5)	20 Feb. (5)	13 Mar. (23)	23 Mar. (5)	5 Apr. (23)	22 Apr. (23)	6 May (23)	4.8 (3)	5.9 (3)
r.	3 Dec. (23)	30 Dec. (25)	18 Dec. (6)	4 Jan. (23)	na	na	27 Feb. (23)	15 Mar. (6)	11 Apr. (7)	26 Apr. (6)	30 Apr. (7)	2.2 (6)	3.3 (6)
e.	Early Jan.	na	19 Dec. (10)	#	*	*	#	3 Mar. (10)	6 Feb. (12)	2 Mar. (8)	24 Mar. (12)	na	na
r.	27 Dec. (21)	15 Jan. (21)	na	#	*	*	#	na	17 Mar. (6)	26 Mar. (6)	1 Apr. (6)	na	na
r.	Mid-Nov.	1 Dec. (11)	16 Nov. (11)	na	24 Dec. (11)	5 Apr. (10)	na	3 May (10)	25 Apr. (11)	Mid-May	28 May (11)	na	na
e.	10 Nov. (6)	1 Dec. (6)	5 Dec. (6)	25 Dec. (6)	8 Jan. (6)	13 Feb. (6)	28 Feb. (6)	14 Mar. (6)	8 Apr. (6)	12 Apr. (6)	16 Apr. (6)	1.9 (4)	na
r.	3 Jan. (36)	31 Jan. (36)	Mid-Jan.	#	*	*	#	Late Mar.	17 Feb. (36)	15 Mar. (36)	27 Apr. (36)	na	na
r.	na	29 Nov. (5)	30 Nov. (5)	na	29 Dec. (5)	30 Apr. (5)	na	19 May (5)	30 Apr. (5)	na	30 May (5)	na	na
e.	11 Dec. (5)	19 Dec. (5)	na	#	*	*	#	na	na	13 Apr. (5)	na	na	na
r.	3 Dec. (22)	28 Dec. (23)	Mid-Dec.	14 Jan. (22)	Early Feb.	Late Feb.	12 Mar. (22)	Late Apr.	15 Mar. (22)	1 May (22)	28 May (22)	4.8 (unk)	6.1 (unk)
r.	3 Dec. (17)	15 Dec. (17)	na	4 Jan. (17)	na	na	1 Mar. (17)	na	na	3 Apr. (17)	na	1.0 (unk)	na
	3 Jan. (5)	na	na	#	*	*	#	na	na	18 Mar. (5)	na	na	na
.	Early Nov.	12 Nov. (6)	30 Oct. (6)	Mid-Nov.	27 Nov. (6)	10 May (6)	Mid-May	19 May (6)	14 May (6)	Late May	25 May (6)	3.0 (unk)	na
.	5 Jan. (27)	11 Feb. (27)	na	na	na	na	na	na	26 Feb. (8)	7 Mar. (6)	12 Apr. (8)	na	na
.	31 Oct. (7)	11 Nov. (7)	11 Nov. (7)	22 Nov. (7)	5 Dec. (7)	26 Apr. (7)	10 May (7)	21 May (7)	30 Apr. (7)	24 May (7)	2 June (7)	4.6 (5)	7.3 (5)
.	3 Nov. (19)	23 Nov. (19)	na	29 Nov. (19)	na	na	21 Mar. (19)	na	9 May (19)	19 May (19)	8 June (19)	3.5 (unk)	6.1 (unk)
	20 Jan (20)	na	na	na	na	na	na	na	na	16 Mar. (20)	May	na	na
	Early Dec.	na	na	na	na	na	na	na	na	Late Apr.	na	na	na
	27 Nov. (33)	11 Dec. (33)	na	na	na	na	na	na	na	na	22 May (15)	na	na
	Early Dec	na	na	na	na	na	na	na	na	Late Mar.	na	na	na
	Jan.	na	na	na	na	na	na	na	na	Late Mar.	na	0.3 (unk)	na
	24 Dec. (14)	15 Jan. (15)	Late Dec.	21 Jan. (14)	na	na	17 Feb. (14)	na	6 Mar. (7)	25 Mar. (7)	30 Apr. (7)	2.5 (unk)	na
	26 Nov. (6)	5 Dec. (6)	na	na	na	na	na	na	28 Mar. (6)	6 Apr. (6)	19 Apr. (6)	1.9 (4)	3.0 (4)
	Late Dec.	na	na	Mid-Jan.	na	na	ea	na	na	na	na	na	na

, or drift ice.
years of data used in computing date given. Exact dates (e.g., 12 Nov.) are more accurate than indefinite dates (e.g., Mid-Dec.).
rs of record were either indeterminable or of less than five years' duration.

eason for all years of record is greater than 50 percent.
eezeup occurred during a season.

FIG. 25 FREEZE AND BREAKUP DATES (Cont'd)

ICE CONDITIONS

CHINA

LOCATION	LAT.	LONG.	FIRST ICE			FREEZEUP	BREAKUP	LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
			Earliest	Average	Latest	Average	Average	Earliest	Average	Latest		
Chihli, Gulf of (Po Hai)	38°30N	120°00E	na	Mid-Dec.	na	na	na	na	Late Mar.	na	0.5 (unk)	2.0 (unk)
Ch'in-huang-tao	39°56N	119°37E	[illegible]	Early Dec.	na	na	na	na	na	na	na	na
Dairen (Lü-ta)	38°55N	121°39E	na	Early Dec.	na	na	na	na	Mid-Mar.	na	1.0 (unk)	na
Liao-tung Wan	40°30N	121°30E	na	Mid-Nov.	na	na	na	na	Late Mar.	na	0.5 (unk)	na
Lü-shun (Port Arthur)	38°48N	121°16E	na	Early Jan.	na	na	na	na	Mar.	na	na	na
Ta-ku	38°59N	117°41E	na	Dec.	na	na	na	na	Mar.	na	0.5 (unk)	2.5 (unk)

Footnotes: na Not available.
The years of record for the indefinite dates (e.g., Mid-Dec.) were either indeterminable or of less than five years' duration.
(unk) Number of years unknown.

LOCATION	LAT.	LONG.	FIR
			Earliest
Chinnamp'o	38°44N	125°24E	na
Chunghŭng-ni	39°59N	128°12E	na
Inch'on	37°28N	126°36E	8 Dec. (6)
Korea Bay	39°00N	124°00E	na
Mayang-do	40°00N	128°12E	na
Najin	42°15N	130°18E	na
Najin-man	42°08N	130°15E	na
Sinp'o-hang	40°02N	128°12E	na
Sinŭiju	40°06N	124°24E	na
Sŏsura-hang	42°17N	130°36E	na
Tumen River	42°18N	130°41E	na
Wŏnsan	39°10N	127°26E	na
Wŏnsan-hang	39°10N	127°26E	na
Yongamp'o	39°56N	124°22E	25 Nov. (21)

Footnotes: na Not available.
Numbers in parentheses below dates r
dates (e.g., Dec.). When dates are s
(unk) Number of years unknown.
Occurrence of no ice or freezeup dur
* In at least one year of record no ic

ICE CONDITIONS

JAPAN

LOCATION	LAT.	LONG.	FIRST ICE			FREEZEUP	BREAKUP	LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
			Earliest	Average	Latest	Average	Average	Earliest	Average	Latest		
Akkeshi	43°02N	144°51E	4 Jan. (5)	19 Jan. (5)	3 Feb. (5)	na	na	22 Feb. (5)	13 Mar. (5)	3 Apr. (5)	na	7 (unk)
Erimo	41°56N	143°15E	15 Jan. (6)	# (6)	* (6)	#	#	* (7)	# (7)	16 Feb. (7)	na	na
Hakodate	41°45N	140°43E	24 Dec. (7)	13 Jan. (7)	* (7)	na	na	* (6)	18 Feb. (6)	14 Mar. (6)	na	na
Hiroo	42°17N	143°19E	11 Jan. (5)	# (5)	* (5)	#	#	* (5)	# (5)	26 Feb. (5)	na	na
Ishikari-gawa	43°15N	141°23E	na	Mid-Nov.	na	Mid-Dec.	Mid-Feb.	na	Mar.	na	na	na
Kushiro	42°58N	144°23E	20 Nov. (8)	20 Dec. (8)	11 Feb. (8)	na	na	7 Mar. (8)	17 Mar. (16)	2 Apr. (8)	na	na
Kushiro-kō	42°59N	144°22E	na	na	na	na	na	na	Late Apr.	na	na	na
Muroran-kō	42°21N	140°59E	Feb.	na	na	na	na	na	na	na	na	na
Nemuro-kaikyō	44°00N	145°20E	na	Late Nov.	na	na	na	na	Late Apr.to early May	na	na	na
Oshidomari	45°15N	141°13E	Early Mar.	#	*	#	#	*	#	Mid-Mar.	na	na
Rishiri-tō	45°11N	141°15E	na	na	na	na	na	na	Mar.	na	na	na
Rumoi	43°56N	141°39E	na	# (5)	* (5)	#	#	* (5)	# (5)	na	na	na
Rumoi-kō	43°57N	141°38E	na	#	*	#	#	*	#	na	na	na
Urakawa	42°09N	142°47E	5 Jan. (7)	27 Jan. (7)	* (7)	na	na	* (7)	19 Feb. (7)	7 Mar. (7)	na	na
Wakkanai	45°25N	141°40E	29 Dec. (7)	16 Jan. (7)	5 Feb. (7)	na	na	5 Mar. (7)	14 Mar. (7)	29 Mar. (7)	na	na

Footnotes: Numbers in parentheses below dates refer to years of data used in computing the date given. Exact dates (e.g., 4 Jan.) are more accurate than indefinite dates (e.g., Mid-Nov. or Nov.). When dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.
na Not available.
(unk) Number of years unknown.
Occurrence of no ice or freezeup during a season for all years of record is greater than 50 percent.
* In at least one year of record no ice or freezeup occurred during a season.

EAKUP DATES (Cont'd)

LAST ICE		Mean maximum thickness (feet)	Absolute maximum thickness (feet)
Average	Latest		
Late Mar.	na	0.5 (unk)	2.0 (unk)
na	na	na	na
Mid-Mar.	na	1.0 (unk)	na
Late Mar.	na	0.5 (unk)	na
Mar.	na	na	na
Mar.	na	0.5 (unk)	2.5 (unk)

ess than five years' duration.

ST ICE		Mean maximum thickness (feet)	Absolute maximum thickness (feet)
erage	Latest		
3 Mar. (5)	3 Apr. (5)	na	7 (unk)
# (7)	16 Feb. (7)	na	na
8 Feb. (6)	14 Mar. (6)	na	na
# (5)	26 Feb. (5)	na	na
Mar.	na	na	na
Mar. (16)	2 Apr. (8)	na	na
e Apr.	na	na	na
na	na	na	na
e Apr.to ly May	na	na	na
#	Mid-Mar.	na	na
ar.	na	na	na
# 5)	na	na	na
	na	na	na
Feb. (7)	7 Mar. (7)	na	na
Mar. (7)	29 Mar. (7)	na	na

(e.g., 4 Jan.) are more accurate than indefinite dates
nable or of less than five years' duration.

ICE CONDITIONS

KOREA

LOCATION	LAT.	LONG.	FIRST ICE			FREEZEUP	BREAKUP	LAST ICE			Mean maximum thickness (feet)	Absolute maximum thickness (feet)
			Earliest	Average	Latest	Average	Average	Earliest	Average	Latest		
Chinnamp'o	38°44N	125°24E	na	Dec.	na	na	na	na	Mar.	na	5.0 (unk)	na
Chunghŭng-ni	39°59N	128°12E	na	Dec.	na	na	na	na	Mar.	na	2.0 (unk)	na
Inch'on	37°28N	126°36E	8 Dec. (6)	31 Dec. (6)	21 Jan. (6)	na	na	21 Feb. (6)	25 Feb. (6)	1 Mar. (6)	1.4 (unk)	3.3 (unk)
Korea Bay	39°00N	124°00E	na	na	na	na	na	na	na	na	0.2 (unk)	na
Mayang-do	40°00N	128°12E	na	Dec.	na	na	na	na	Mar.	na	2.0 (unk)	na
Najin	42°15N	130°18E	na	Dec.	na	na	na	na	Mar.	na	1.0 (unk)	na
Najin-man	42°08N	130°15E	na	#	*	na	na	*	#	na	na	na
Simp'o-hang	40°02N	128°12E	na	Dec.	na	na	na	na	Mar.	na	na	na
Sinŭiju	40°06N	124°24E	na	na	na	na	Early Mar.	na	na	na	na	na
Sŏsura-hang	42°17N	130°36E	na	na	na	na	na	na	Late Mar.	na	na	na
Tumen River	42°18N	130°41E	na	na	na	na	Early Mar.	na	na	na	na	na
Wŏnsan	39°10N	127°26E	na	Dec.	na	na	na	na	Mar.	na	na	na
Wŏnsan-hang	39°10N	127°26E	na	na	na	na	Mid-Mar.	na	Late Mar.	na	na	na
Yongamp'o	39°56N	124°22E	25 Nov. (21)	9 Dec. (21)	24 Dec. (21)	na	26 Feb. (21)	na	na	na	na	na

Footnotes: na Not available.
Numbers in parentheses below dates refer to years of data used in computing the date given. Exact dates (e.g., 8 Dec.) are more accurate than indefinite dates (e.g., Dec.). When dates are shown as indefinite, the years of record were either indeterminable or of less than five years' duration.
(unk) Number of years unknown.
Occurrence of no ice or freezeup during a season for all years of record is greater than 50 percent.
* In at least one year of record no ice or freezeup occurred during a season.

